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(U.S.) Geological Survey, Richmond, VA. Water Resources Div.

1972

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Water Resources Data
for
Virginia
Water Year 1971

Part 1. Surface Water Records
Part 2. Water Quality Records
Part 3. Ground Water Records

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Prepared in cooperation with the State of Virginia
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Water resources data for the 1971 water year for Virginia consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of wells and springs. This report contains discharge records for 182 gaging stations; stage and contents for 9 lakes and reservoirs; water quality for 22 gaging stations, and water levels for 31 observation wells. Also included are 164 crest-stage partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements and analyses. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating local, State, and Federal agencies in Virginia.

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Water Resources Data for Virginia Water Year 1971

Part 1. Surface Water Records
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Part 3. Ground Water Records

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Prepared in cooperation with the State of Virginia
and with other agencies

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City of Norfolk

City of Roanoke

City of Staunton

Corps of Engineers, U.S. Army

Tennessee Valley Authority

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Water Quality Office, Environmental Protection Agency

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1972

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WATER RESOURCES DATA FOR VIRGINIA, 1971

PART 1. SURFACE-WATER RECORDS
PART 2. WATER-QUALITY RECORDS
PART 3. GROUND-WATER RECORDS

INTRODUCTION

Water resources data for the 1971 water year for Virginia, including records of streamflow or reservoir storage at gaging stations, partial-record stations, and miscellaneous sites, records of water-quality data on the chemical and physical characteristics of surface water, and records of ground-water levels at index wells, are given in this report. In Part 1, records are included for 182 gaging stations of which 172 are streamflow discharge stations and 10 are reservoir or lake stations; also are included records for 163 crest-stage partial-record stations and 32 miscellaneous sites. Locations of gaging stations are shown in Figure 2. In Part 2, there are included data on the quality of surface water (chemical, temperature, and sediment) collected from designated sampling sites at predetermined intervals such as once daily, weekly, or monthly. Records are given for 22 continuous record sampling stations. Locations of water-quality stations are shown in Figure 2. In Part 3, records are included for 31 wells. At 21 of these, the records are obtained from a water-level recorder that gives a continuous graph of the fluctuations while at 10, the records are from direct readings made on the days indicated. Locations of index wells are shown in Figure 2. A few pertinent stations (not included above) in bordering States are also included in this report. The records were collected and computed by the Water Resources Division of the U.S. Geological Survey under the direction of J. W. Gambrell, district chief. These data represent that portion of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Virginia.

Beginning with the 1961 water year, streamflow records and related data have been released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records beginning with the 1964 water year have been similarly released either in separate reports or in conjunction with streamflow records. For some States, records of ground-water levels are similarly released. These reports are for limited distribution and are designed primarily for rapid release of data shortly after the end of the water year.

Records of discharge and stage of streams, and contents and stage of lakes and reservoirs are published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and since then are in a 5-year series. Records of chemical-quality, water temperatures, and suspended sediment have been published since 1941 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Records of ground-water levels are published in a series of water-supply papers entitled, "Ground-Water Levels in the United States." Through 1955 these were in an annual series but are now in a 5-year series. More information is given under the heading "Publications" on pages 10 and 13.

COOPERATION

The U.S. Geological Survey and organizations of the State of Virginia have had cooperative agreements for the systematic collection of streamflow records since 1925, for water-quality records from 1944 to 1956 and since 1967, and for records of ground-water levels from 1931 to 1956 and since 1967. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

Virginia Department of Conservation and Economic Development, M. M. Sutherland, director.

Virginia Department of Highways, D. B. Fugate, commissioner.

City of Alexandria, A. M. Hair, Jr., city manager.

County of Chesterfield, M. W. Burnett, executive secretary.

County of Fairfax, George J. Kelley, Jr., county executive.

City of Newport News, J. M. Pharr, director, Department of Public Utilities.

City of Norfolk, S. M. Hodges, utilities administrator.

City of Roanoke, J. F. Hirst, city manager.

City of Staunton, E. D. Martin, city manager.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, in collecting records for 65 gaging stations and 2 water-quality stations published in this report.

Under a cooperative agreement covering the Tennessee River basin, the Tennessee Valley Authority furnished financial assistance for the operation of 9 gaging stations, the records for which are published herein.

Assistance was also furnished by the Forest Service of the United States Department of Agriculture and by the Water Quality Office, Environmental Protection Agency.

The Appalachian Power Company and the City of Radford aided in collecting records.

Organizations that supplied data are acknowledged in station descriptions.

RECORDS COLLECTED BY THE STATE OF VIRGINIA

In addition to data collected by the U.S. Geological Survey, there are included herein the records for 77 gaging stations and 13 index wells operated by the Virginia Department of Conservation and Economic Development, M. M. Sutherland, director, through the Division of Water Resources, J. M. Alexander, commissioner. The records are published as furnished by the Virginia Division of Water Resources. The furnished records are acknowledged individually.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined as follows:

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons.

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons, and represents a runoff of approximately 0.0372 inch from 1 square mile.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (cfs) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or approximately 448.8 gallons per minute.

Discharge is the volume of water (or more broadly, total fluids), that passes a given point within a given period of time.

Mean discharge is the arithmetic average of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time. If this discharge is reported instead of the daily mean, the heading of the discharge column in the tables is "Discharge (cfs)."

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

Hardness of water is a physical-chemical characteristic attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Land surface datum (lsd) is a precise datum plane that is approximately at land surface at each ground-water observation well.

Measuring point (MP) is a permanent point from which the distance to the water surface in a well is measured to obtain the water level.

Micrograms per liter (µg/l, UG/L) is a unit expressing the concentration of chemical constituents in solution as the weight (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (mg/l, MG/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the weight of solute per unit volume of water. Milligrams or micrograms per liter may be converted to milliequivalents (one thousandth of a gram-equivalent weight of a constituent) per liter by multiplying by the factors in table 1. Concentration of suspended sediment also is expressed in mg/l, and is based on the weight of sediment per liter of water-sediment mixture. In the range of concentration of suspended sediment reported herein, concentration expressed in parts per million is essentially equivalent to that in mg/l.

TABLE 1.--Factors for conversion of chemical constituents in milligrams or micrograms per liter to milliequivalents per liter based on 1961 atomic weights

Ion	Multiply by	Ion	Multiply by
Bicarbonate (HCO_3^{-1})..	0.01639	Nitrate (NO_3^{-1})......	0.01613
Calcium (Ca^{+2})........	.04990	Phosphate (PO_4^{-3})....	.03159
Chloride (Cl^{-1}).......	.02821	Potassium (K^{+1})......	.02557
Fluoride (F^{-1})........	.05264	Sodium (Na^{+1})........	.04350
Iron (Fe^{+3})*..........	.05372	Sulfate (SO_4^{-2})......	.02082
Magnesium (Mg^{+2})......	.08226		

* Constituent reported in micrograms per liter; multiply by factor and divide results by 1,000.

Partial-record station is a particular site where limited streamflow data are collected systematically over a period of years for use in hydrologic analyses.

Runoff in inches (IN.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment discharge is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight, or by volume, that is discharged in a given time. It is computed by multiplying discharge times mg/l times 0.0027.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/l).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Because the specific conductance is related to the number and specific chemical types of ions in solution, it can be used for approximating the dissolved-solids content in the water. Commonly, the amount of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream or from well to well, and it may even vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height and the volume of water per unit of time, flowing in a channel.

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the presence of a thermograph or a digital mechanism that automatically records water temperatures on paper tape.

Tons per day is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour day.

WRD is used as an abbreviation for "Water-Resources Data" in the summary REVISIONS paragraph to refer to previously published State annual basic-data reports.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

International Hydrological Decade (IHD) River Stations provide a general index of runoff and materials in the water balance (discharge of water, and dissolved and transported solids) of the world. In the United States, IHD Stations provide indices of runoff and of the general distribution of water in the principal river basins of the conterminous United States and Alaska.

DOWNSTREAM ORDER AND STATION NUMBER

Stations are listed in a downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all mainstream stations are listed before the first mainstream station. Stations on tributaries to tributaries are listed in a similar manner. In the lists of gaging stations and water-quality stations in the front of this report the rank of tributaries is indicated by indention, each indention representing one rank.

As an added means of identification, each gaging station, partial-record station, and water-quality station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and gaging stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 01667500, which appears just to the left of the station name, includes the 2-digit part number "01" plus the 6-digit downstream order number "667500." In this report, the records are listed in downstream order by parts. The part number refers to an area whose boundaries coincide with certain natural drainage lines. Records in this report are in Part 1 (North Atlantic slope basins), Part 2 (South Atlantic slope basins), and Part 3 (Ohio River basin). All records for a drainage basin encompassing more than one State can be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

WELL NUMBER

The well-numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The first 6 digits denote the degrees, minutes, and seconds of latitude followed by a letter denoting north or south. Seven digits following the letter denote degrees, minutes, and seconds of longitude. The last digit is a sequential number for wells within a 1-second grid. The system provides the geographic location of the well and a unique number for each well.

A second well-numbering system used in Virginia utilizes 7 1/2-minute quadrangles within the State. The quadrangles are numbered from west to east, and lettered from south to north, omitting the letters "I" and "O." The designation for each quadrangle is determined by the method "Read Right, Up." Wells are numbered serially within each quadrangle. This local well number is shown immediately after the U.S. Geological Survey well number.

Well records furnished by the Virginia Division of Water Resources also include the well number based on an indexing system used by that agency.

SURFACE-WATER RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at 15-, 30-, or 60-minute intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6. Surface areas of lakes or reservoirs are determined from instrument surveys using standard methods. The configuration of the reservoir bottom is determined by sounding at many points.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables; then the monthly and yearly mean discharge are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which adjustment factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

At some stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, adjoining good record, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on most lakes and reservoirs a monthly and yearly summary table of stage and contents or a table showing the daily gage height is given. Records are published for the water year, which begins on October 1 and ends on September 30. A calendar for the current water year is shown on the reverse side of the front cover to facilitate finding the day of the week for any date.

The description of the gaging stations gives the location, drainage area, period of record, type and history of gages, average discharge, extremes of discharge or contents, general remarks, and notations of revisions of previously published records. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD." The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey unless otherwise qualified. The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. The maximum discharge (or contents) and the maximum gage height, the minimum discharge if there is little or no regulation (or minimum contents) and the minimum gage height if it is significant are given under "EXTREMES." The minimum daily discharge is given if there is extensive regulation (also the minimum discharge and gage height if they are abnormally low). In the first paragraph headed "Current year:" the data given are for the complete current water year unless otherwise specified. In the second paragraph under "EXTREMES" headed "Period of record:" the data given are for the period of record given in PERIOD OF RECORD paragraph. Reliable information concerning major floods that occurred outside the period of record is given in the third or last paragraph under "EXTREMES." Unless otherwise qualified, the maximum discharge (or contents) corresponds to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge (or contents), it is given separately. Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, and availability of Water-Quality records, is given under "REMARKS"; for reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir, is also given under "REMARKS."

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISIONS (WATER YEARS)" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge were revised that fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN.").

In the yearly summary below the monthly summary, the figures following "MAX" are the maximum daily discharges for the calendar and water years; likewise, those following "MIN" are the minimum daily discharges.

Footnotes to the table of daily discharges are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

Peak discharges and their times of occurrence and corresponding gage heights for many stations are listed below the yearly summary. All independent peaks above the selected base are given. The base discharge, which is given in parentheses, is selected so that an average of about three peaks a year can be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subjected to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330.

Data collected at partial-record stations and miscellaneous sites are given in tables at the end of the surface-water records in this report. The first is a table of annual maximum stage and discharge at crest-stage stations and the second is a table of discharge measurements at miscellaneous sites.

Accuracy of data

The accuracy of discharge data depends primarily on (1) the stability of the stage-discharge relation, or if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretation of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges is within 5 percent of the true discharge; "good" within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 significant figures above 1,000 cfs. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Publications

In each water-supply paper entitled, "Surface Water Supply of the United States" there is a list of the numbers of preceding water-supply papers containing streamflow information for the area covered by that report. In addition, there is a list of numbers of water-supply papers containing detailed information on major floods in the area. Records for stations in Virginia for the period October 1960 to September 1965 are in Water-Supply Papers 1903, 1904, 1908, and 1910.

Two series of summary reports entitled, "Compilation of Records of Surface Waters of the United States" have been published; the first series covers the entire period of record through September 1950 and the second series covers the period October 1950 to September 1960. These reports contain summaries of monthly and annual discharge and monthend storage for all previously published records, as well as some records not contained in the annual series of water-supply papers. All records were reexamined and revised where warranted. Estimates of discharge were made to fill short gaps whenever practical. The yearly summary table for each gaging station lists the numbers of the water-supply papers in which daily records were published for that station. Records for stations in Virginia are compiled in Water-Supply Papers 1302, 1303, 1305, and 1306 through September 1950, and in 1722, 1723, 1725, and 1726 for October 1950 to September 1960.

Special reports on major floods or droughts or of other hydrologic studies for the area have been issued in publications other than water-supply papers. Information relative to these reports may be obtained from the district office.

Other data available

Information of a more detailed nature than that published for most of the gaging stations, such as discharge measurements, gage-height records, and rating tables, is on file in the district office. Also most gaging-station records are available in computer-usable form and many statistical analyses have been made.

Records of discharge collected by agencies other than the Geological Survey

Records of discharge not published by the Geological Survey were collected in Virginia at 5 sites during the 1971 water year by the Research Division, Agricultural Engineering Department, Virginia Polytechnic Institute and State University, Blacksburg, Va. 24060. Information on records at these sites can be obtained from that agency.

WATER-QUALITY RECORDS

Collection and examination of data

Water samples for analyses usually are collected at or near gaging stations. The discharge records at these stations are used in conjunction with the computations of the chemical constituents and sediment loads in this report.

Descriptive statements are given for water-quality stations located at or near streamflow stations. Given are location, drainage area, periods of record for the various water-quality data, extremes of pertinent data, and general remarks, in a format similar to that used for streamflow gaging stations.

Water-quality information is presented for chemical quality, water temperature, and fluvial sediment. Chemical quality includes concentrations of individual dissolved constituents and certain properties or characteristics such as hardness, specific conductance, and pH. Water-temperature data represent once-daily observations except for stations where a continuous temperature recorder furnished information from which daily minimums and maximums are obtained. Fluvial-sediment information is given for suspended-sediment discharges and concentrations.

Prior to the 1968 water year, data for chemical constituents and concentration of suspended sediment were reported in parts per million (ppm) and water temperatures were reported in degrees Fahrenheit (°F). In October 1967 the U.S. Geological Survey began to use the metric system; data for chemical constituents and concentrations of suspended sediment are now reported in milligrams per liter (mg/l) and water temperatures are given in degrees Celsius (centigrade, °C). In waters with a density of 1.000 g/ml (grams per milliliter), parts per million and milligrams per liter can be considered equal. In waters with a density greater than 1.000 g/ml, values in parts per million should be multiplied by the density to convert to milligrams per liter. To convert temperatures in degrees Celsius to degrees Fahrenheit, see table 2 on page 12.

In October 1968, the Geological Survey began reporting many of the chemical constituents as well as the minor elements in micrograms per liter instead of milligrams per liter. (See "Definition of Terms," p. 4).

Solutes

The methods of collecting and analyzing water samples for determining the kinds and concentrations of solutes are described by Brown, Skougstad, and Fishman (1970). One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled at several verticals across the channel to determine accurately the solute concentration.

Temperature

Water temperatures are measured at most of the water-quality stations. For daily stations, the water temperatures are taken about the same time each day when sample is collected.

At stations where continuously recording thermographs are present, the records consist of maximum and minimum temperatures for each day and the monthly averages.

TABLE 2.--Degrees Celsius (°C) to degrees Fahrenheit (°F)*
(Temperature reported to nearest 0.5°C)

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
0.0	32	10.0	50	20.0	68	30.0	86	40.0	104
.5	33	10.5	51	20.5	69	30.5	87	40.5	105
1.0	34	11.0	52	21.0	70	31.0	88	41.0	106
1.5	35	11.5	53	21.5	71	31.5	89	41.5	107
2.0	36	12.0	54	22.0	72	32.0	90	42.0	108
2.5	36	12.5	54	22.5	72	32.5	90	42.5	108
3.0	37	13.0	55	23.0	73	33.0	91	43.0	109
3.5	38	13.5	56	23.5	74	33.5	92	43.5	110
4.0	39	14.0	57	24.0	75	34.0	93	44.0	111
4.5	40	14.5	58	24.5	76	34.5	94	44.5	112
5.0	41	15.0	59	25.0	77	35.0	95	45.0	113
5.5	42	15.5	60	25.5	78	35.5	96	45.5	114
6.0	43	16.0	61	26.0	79	36.0	97	46.0	115
6.5	44	16.5	62	26.5	80	36.5	98	46.5	116
7.0	45	17.0	63	27.0	81	37.0	99	47.0	117
7.5	45	17.5	63	27.5	81	37.5	99	47.5	117
8.0	46	18.0	64	28.0	82	38.0	100	48.0	118
8.5	47	18.5	65	28.5	83	38.5	101	48.5	119
9.0	48	19.0	66	29.0	84	39.0	102	49.0	120
9.5	49	19.5	67	29.5	85	39.5	103	49.5	121

*°C = 5/9 (°F - 32) or °F = 9/5 (°C) + 32.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples may be obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

Samples are usually collected daily or, at some stations, weekly. However, during periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the sub-divided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the sub-divided day method. For periods when no samples are collected, daily loads of suspended sediment are estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

Publications

The annual series of water-supply papers that contain information on quality of surface waters in Virginia are listed below.

Year	WSP No.	Year	WSP No.	Year	WSP No.
1945	1030	1955	1400	1965	1961
1946	1050	1956	1450	1966	1991,
1947	1102	1957	1520		1992
1948	1132	1958	1571	1967	2011,
1949	1162	1959	1641		2012
1950	1186	1960	1741	1968	2091,
1951	1197	1961	1881		2092,
1952	1250	1962	1941		2093
1953	1290	1963	1947		
1954	1350	1964	1954		

GROUND-WATER RECORDS

Collection and reporting of data

Water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Unless otherwise indicated, all water levels are below land surface. If known, the altitude of the land-surface datum above mean sea level is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Publications

The numbers of water-supply papers containing records of water levels in Virginia are listed below:

Calendar Year	WSP No.	Calendar Year	WSP No.	Calendar Year	WSP No.
1935	777	1943	987	1951	1192
1936	817	1944	1017	1952	1222
1937	840	1945	1024	1953	1266
1938	845	1946	1072	1954	1322
1939	886	1947	1097	1955	1405
1940	907	1948	1127	1956-58	1538
1941	937	1949	1157	1959-63	1803
1942	945	1950	1166	1964-68	1978

HYDROLOGIC CONDITIONS

Mean streamflow for the year varied areally but was generally above normal throughout the State. Runoff at the four index gaging stations, compared with normal for the reference period 1941-70, was: Rapidan River near Culpeper, 144 percent; Slate River near Arvonia, 142 percent; Nottoway River near Stony Creek, 111 percent; and North Fork Holston River near Saltville, 121 percent. Figure 1 shows the variation of monthly runoff throughout the year at these stations.

At the beginning of the year, runoff was below normal throughout the State being deficient in the southeastern part.

Some improvement occurred during November but by December flows had receded and were again deficient in the southeast.

Winter precipitation was sufficient to cause excessive runoff during February at all key stations. Runoff generally remained near normal through March and April. Heavy rains caused runoff to be excessive during May and June. Record-high monthly flows occurred during May at all index stations excepting the Nottoway River station. Streamflow remained near or well above normal throughout the rest of the year except April when drought conditions prevailed particularly in the western part of the State.

During May most of the river basins in the State experienced some flooding on their smaller streams but no major damage from floodwaters was reported. Mud and debris slides caused some problems in Loudoun County in November, in north central Virginia in May, and in Pulaski County in June.

Tropical storms Doria, in August, and Ginger, in September, caused some local flooding in the eastern and southeastern parts of the State. There was some minor local flooding at scattered locations in all months except April.

Ground-water levels in general rose during the year and at yearend were in the normal to above normal range.

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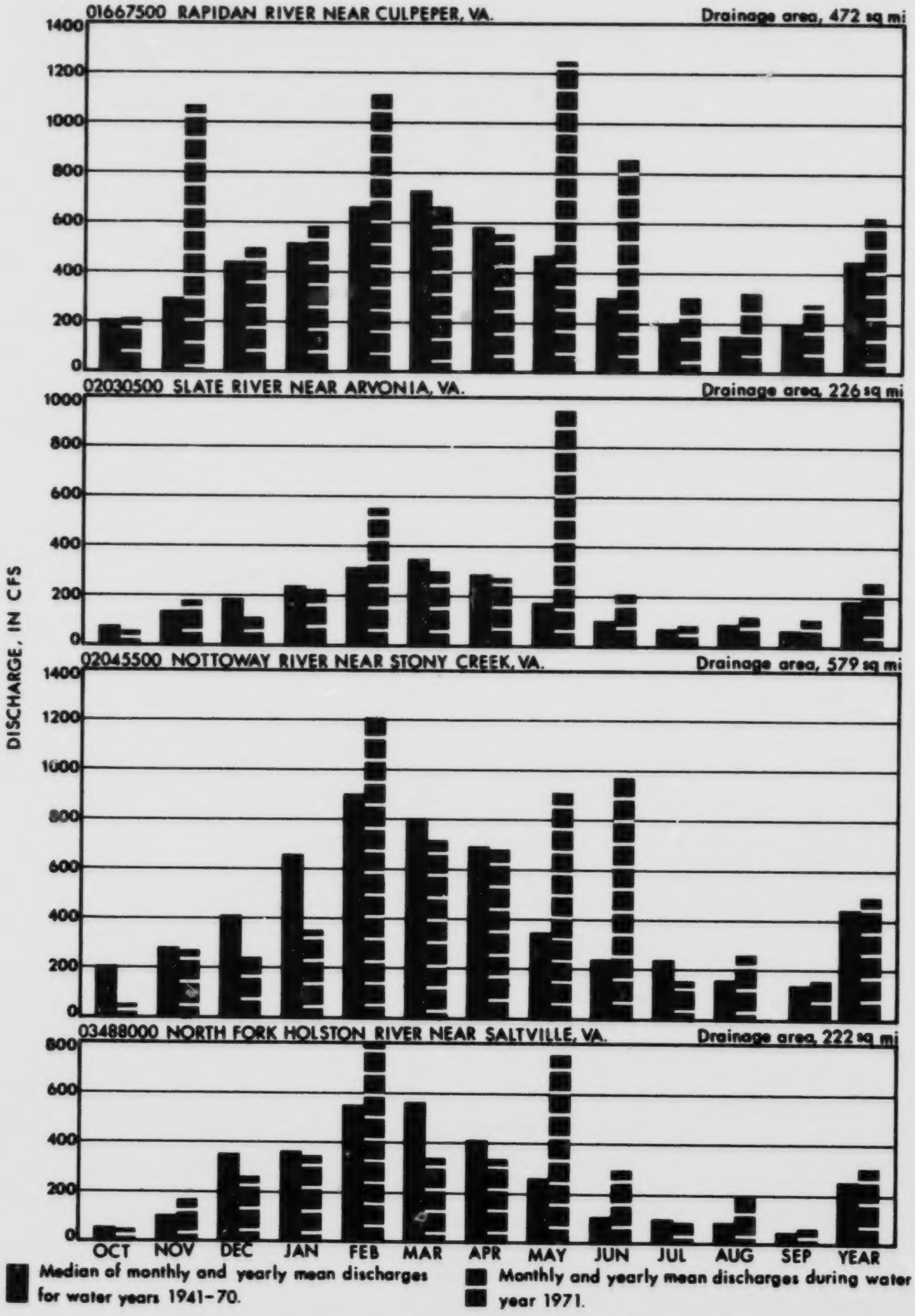

Figure 1. Runoff during 1971 water year compared with median runoff for period 1941-70 for four representative gaging stations

PART 1. SURFACE-WATER RECORDS

NASSAWADOX CREEK BASIN

01484800 GUY CREEK NEAR NASSAWADOX, VA.

LOCATION.--Lat 37°30'08", long 75°52'22" (corrected), Northampton County, on left bank 25 ft upstream from bridge on State Highway 606, 1.9 miles northwest of Nassawadox, and 2.1 miles upstream from mouth.

DRAINAGE AREA.--1.72 sq mi.

PERIOD OF RECORD.--November 1963 to current year.

GAGE.--Water-stage recorder and wooden control. Datum of gage is 11.67 ft above mean sea level.

AVERAGE DISCHARGE.--7 years (1964-71), 1.05 cfs (8.29 inches per year).

EXTREMES.--Current year: Maximum discharge, 20 cfs Aug. 27 (gage height, 3.17 ft); minimum daily, 0.06 cfs Nov. 1, 2.

Period of record: Maximum discharge, 60 cfs July 10, 1970 (gage height, 4.81 ft); no flow at times in 1964 and 1966.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.06	.20	.68	.44	1.6	1.9	.60	2.4	.36	.20	.22
2	.14	.06	.20	.44	.44	1.6	1.8	.66	1.6	.36	.20	.22
3	.12	.08	.12	.39	.39	2.5	2.4	1.1	1.2	.32	.18	.22
4	.12	.08	.12	.39	.60	4.0	2.0	.84	1.1	.28	.19	.22
5	.10	.12	.14	.81	1.1	2.6	1.8	.72	.84	.28	.42	.22
6	.10	.10	.16	.55	.97	2.2	8.5	.60	.66	.28	.27	.22
7	.14	.10	.16	.44	1.1	2.0	11	.55	.60	.32	.26	.23
8	.16	.10	.16	.34	1.8	1.9	4.9	.91	.60	.27	.25	.24
9	.16	.12	.18	.34	1.6	1.8	3.1	.72	.55	.27	.24	.24
10	.16	.12	.18	.34	1.3	1.8	2.4	.55	.55	.28	.24	.24
11	.14	.18	.20	.39	1.2	1.7	1.8	.50	.50	.28	.26	.25
12	.14	.18	.20	.44	1.1	1.6	1.7	.45	.55	.32	.24	.26
13	.12	.18	.20	.39	2.5	1.5	1.5	1.3	.60	.27	.24	.26
14	.12	.18	.18	.55	2.2	1.5	1.3	2.4	.66	.26	.24	.25
15	.12	.34	.16	.55	1.8	1.6	1.2	1.3	.66	.24	.24	.25
16	.12	.20	.49	.55	1.7	1.7	1.2	7.6	.91	.25	.23	.25
17	.10	.20	.68	.44	1.6	1.5	1.1	4.3	.78	.23	.23	.25
18	.10	.24	.34	.44	1.5	1.4	1.1	1.9	.66	.22	.25	.26
19	.10	.39	.24	.39	1.4	1.4	1.1	1.3	.60	.22	.25	.26
20	.16	.34	.29	.34	1.4	1.4	.98	.98	.55	.22	.24	.26
21	.10	.34	.55	.39	1.3	1.1	.98	1.1	.50	.22	.22	.27
22	.16	.20	.81	.44	1.4	1.1	.98	.91	.50	.22	.22	.27
23	.14	.20	.60	.44	1.5	1.2	.91	.72	.55	.22	.22	.27
24	.12	.20	.55	.49	1.2	1.1	.91	.66	.50	.21	.21	.26
25	.10	.20	.49	.60	1.1	1.1	.91	.60	.45	.21	.21	.27
26	.08	.20	.55	.60	1.1	1.1	.84	.55	.45	.21	.21	.27
27	.08	.20	.49	.55	1.7	1.8	.84	.45	.45	.23	2.7	.27
28	.08	.20	.44	.49	1.7	2.3	.72	.72	.45	.23	.55	.27
29	.08	.20	.44	.49	-------	3.0	.72	1.5	.50	.21	.24	.27
30	.08	.20	.44	.49	-------	2.5	.66	4.6	.45	.20	.24	.28
31	.08	-------	.44	.44	-------	2.2	-------	5.4	-------	.21	.23	-------
TOTAL	3.66	5.51	10.40	14.62	37.14	55.8	61.25	46.49	21.37	7.90	10.12	7.52
MEAN	.12	.18	.34	.47	1.33	1.80	2.04	1.50	.71	.25	.33	.25
MAX	.16	.39	.81	.81	2.5	4.0	11	7.6	2.4	.36	2.7	.28
MIN	.08	.06	.12	.34	.39	1.1	.66	.45	.45	.20	.18	.22
CFSM	.07	.10	.20	.27	.77	1.05	1.19	.87	.41	.15	.19	.15
IN.	.08	.12	.22	.32	.80	1.21	1.32	1.01	.46	.17	.22	.16

CAL YR 1970 TOTAL 484.73 MEAN 1.33 MAX 24 MIN .06 CFSM .77 IN 10.48
WTR YR 1971 TOTAL 281.78 MEAN .77 MAX 11 MIN .06 CFSM .45 IN 6.09

PEAK DISCHARGE (BASE, 20 CFS).--AUG. 27 (2230) 20 CFS (3.17 FT).

01613900 HOGUE CREEK NEAR HAYFIELD, VA.

LOCATION.--Lat 39°12'52", long 78°17'18", Frederick County, on right bank 15 ft upstream from bridge on State Highway 614, 0.8 mile upstream from Gap Run, and 1.3 miles southeast of Hayfield.

DRAINAGE AREA.--15.0 sq mi.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 668.60 ft above mean sea level.

AVERAGE DISCHARGE.--11 years, 12.0 cfs (10.86 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,810 cfs Nov. 13 (gage height, 7.18 ft), from rating curve extended above 300 cfs; minimum, 0.95 cfs Oct. 4; minimum gage height, 1.17 ft Sept. 9.

Period of record: Maximum discharge, 1,950 cfs July 9, 1970 (gage height, 7.43 ft), from rating curve extended above 300 cfs; no flow for part of Sept. 14, 1968, cause unknown; minimum gage height, 0.94 ft Aug. 31, 1961.

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	14	9.8	13	11	28	7.1	4.1	65	2.6	8.9	1.7
2	1.2	8.4	9.0	15	7.8	23	7.1	4.3	53	2.5	7.1	1.9
3	1.2	30	7.6	18	8.5	26	6.2	5.4	58	1.7	8.0	1.9
4	1.2	19	8.4	35	9.3	26	5.6	5.2	37	1.7	11	1.7
5	1.2	15	7.2	117	12	26	5.6	4.6	27	1.7	16	1.4
6	1.2	11	5.7	75	17	40	8.9	4.9	20	1.7	7.6	1.4
7	1.4	9.2	4.7	48	12	85	42	5.9	16	1.7	5.2	1.4
8	1.2	7.2	4.2	35	13	54	41	19	14	1.6	3.6	1.2
9	1.2	5.7	4.5	29	14	35	32	13	11	1.6	3.0	1.1
10	1.2	8.0	4.2	24	14	30	28	7.6	9.8	1.6	2.6	1.1
11	1.4	47	3.9	19	15	26	23	5.9	8.9	1.7	3.0	1.7
12	1.6	138	7.5	20	17	22	21	5.6	8.0	1.9	2.8	8.0
13	1.5	586	8.8	21	358	20	18	37	8.9	1.4	2.3	9.8
14	1.5	109	7.2	27	172	19	16	48	8.0	1.7	2.3	4.9
15	2.8	83	6.5	35	64	21	14	26	7.1	1.6	2.1	3.0
16	1.5	54	7.6	28	43	20	13	37	7.1	1.7	2.3	2.5
17	1.4	38	87	23	36	17	12	36	5.9	1.7	2.3	3.0
18	1.5	29	68	20	47	15	14	26	4.6	1.7	2.1	2.6
19	1.8	24	48	19	63	18	11	20	4.3	2.1	2.6	2.5
20	1.5	38	35	16	91	23	9.4	18	5.2	1.7	2.1	3.0
21	5.0	56	33	14	96	18	7.6	18	4.0	1.6	1.9	2.6
22	4.5	38	181	13	127	17	7.0	14	4.6	1.6	2.8	2.5
23	2.0	30	105	15	131	16	6.6	11	4.0	1.4	2.5	1.9
24	1.5	22	89	17	76	14	6.2	9.8	3.6	1.6	1.7	1.9
25	1.5	18	64	19	52	12	5.8	9.4	2.8	2.3	1.7	1.7
26	1.4	16	48	25	40	12	5.2	8.0	2.6	2.5	1.7	2.6
27	1.5	15	34	29	47	10	4.7	7.1	2.5	1.9	2.1	2.6
28	1.5	14	26	25	29	9.8	4.3	6.6	4.9	1.6	3.6	2.3
29	1.6	13	20	21	------	9.8	4.1	7.1	4.6	2.5	1.9	1.9
30	9.7	11	16	18	------	8.4	4.0	208	3.0	5.2	1.7	1.7
31	17	------	13	15	------	7.6	------	256	------	11	1.7	------
TOTAL	75.9	1,476.5	971.9	851	1,622.6	708.6	390.4	888.5	415.4	68.8	120.2	77.5
MEAN	2.45	49.2	31.4	27.5	58.0	22.9	13.0	28.7	13.8	2.22	3.88	2.58
MAX	17	586	181	117	358	85	42	256	65	11	16	9.8
MIN	1.2	5.7	3.9	13	7.8	7.6	4.0	4.1	2.5	1.4	1.7	1.1
CFSM	.16	3.28	2.09	1.83	3.87	1.53	.87	1.91	.92	.15	.26	.17
IN.	.19	3.66	2.41	2.11	4.02	1.76	.97	2.20	1.03	.17	.30	.19

CAL YR 1970 TOTAL 7,147.30 MEAN 19.6 MAX 586 MIN .95 CFSM 1.31 IN 17.72
WTR YR 1971 TOTAL 7,667.30 MEAN 21.0 MAX 586 MIN 1.1 CFSM 1.40 IN 19.01

PEAK DISCHARGE (BASE, 400 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-13	0230	7.18	1,810	5-31	0030	5.17	720
2-13	1900	6.16	1,160				

01615000 OPEQUON CREEK NEAR BERRYVILLE, VA.

LOCATION.--Lat 39°10'40", long 78°04'20", Frederick County, on left bank 35 ft downstream from bridge on State Highway 7, 0.2 mile upstream from Abrams Creek, and 5.0 miles west of Berryville.

DRAINAGE AREA.--57.4 sq mi.

PERIOD OF RECORD.--October 1943 to current year.

GAGE.--Water-stage recorder. Datum of gage is 503.24 ft above mean sea level. Prior to July 26, 1949, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--28 years, 36.7 cfs (8.68 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,330 cfs Nov. 13 (gage height, 12.82 ft), from rating curve extended as explained below; minimum daily, 1.8 cfs Oct. 27.

Period of record: Maximum discharge, 6,330 cfs Nov. 13, 1970 (gage height, 12.82 ft), from rating curve extended above 1,000 cfs; minimum daily, 0.20 cfs Sept. 12, 13, 1966.

Flood in October 1942 reached a stage of 18.4 ft, from information by local residents.

REMARKS.--Records fair. Diurnal fluctuation at low flow caused by mills above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	17	25	25	38	68	23	17	180	12	17	7.9
2	3.2	5.9	24	39	28	68	24	17	104	12	50	8.4
3	3.8	160	23	34	24	71	23	19	84	11	19	8.4
4	3.8	80	22	64	26	96	21	21	69	11	24	7.9
5	3.2	40	21	281	41	106	20	18	50	10	37	7.1
6	2.7	22	20	201	73	188	23	17	38	10	18	6.7
7	4.0	14	19	123	53	166	264	17	36	9.5	13	6.3
8	3.2	9.3	18	80	43	91	286	31	34	9.0	11	6.7
9	3.0	7.1	17	64	74	66	98	39	28	8.5	9.8	7.5
10	3.2	13	17	55	50	57	65	22	27	8.0	9.8	7.5
11	3.2	355	17	49	39	50	39	18	25	8.0	17	11
12	3.2	320	22	51	102	44	34	17	25	8.0	23	235
13	2.5	2,190	29	68	1,150	40	33	50	28	7.5	13	242
14	4.6	194	22	81	657	38	29	77	29	7.1	11	47
15	3.7	200	19	149	146	37	25	34	34	6.7	9.3	25
16	3.3	110	19	89	98	37	25	202	31	7.5	8.9	19
17	3.0	68	280	63	86	33	23	108	27	7.9	9.3	28
18	2.8	53	99	51	100	30	26	46	24	7.5	9.3	20
19	2.6	46	61	43	.24	33	23	31	22	8.9	10	17
20	4.6	58	45	35	180	41	22	26	20	9.3	8.9	25
21	7.9	87	40	30	190	33	21	37	19	9.3	8.9	24
22	16	58	499	35	290	29	21	24	19	8.9	8.9	17
23	6.7	45	210	63	551	29	19	19	18	8.9	8.9	17
24	3.5	40	151	90	190	26	19	17	19	9.3	8.4	18
25	2.7	35	88	67	116	25	19	20	18	9.8	7.9	14
26	2.1	32	68	147	91	25	18	154	17	9.3	7.9	16
27	1.8	30	49	94	108	25	18	33	16	9.3	8.9	19
28	2.3	28	40	55	79	25	18	23	15	8.4	9.8	16
29	2.5	27	34	40	------	25	18	22	14	9.8	8.4	14
30	4.9	26	31	55	------	25	17	1,070	13	30	7.5	13
31	33	------	26	54	------	24	------	870	------	16	7.5	------
TOTAL	150.2	4,370.3	2,055	2,375	4,747	1,651	1,314	3,116	1,083	308.4	421.3	911.4
MEAN	4.85	146	66.3	76.6	170	53.3	43.8	101	36.1	9.95	13.6	30.4
MAX	33	2,190	499	281	1,150	188	286	1,070	180	30	50	242
MIN	1.8	5.9	17	25	24	24	17	17	13	6.7	7.5	6.3
CFSM	.08	2.54	1.16	1.33	2.96	.93	.76	1.76	.63	.17	.24	.53
IN.	.10	2.83	1.33	1.54	3.08	1.07	.85	2.02	.70	.20	.27	.59

CAL YR 1970 TOTAL 17,659.0 MEAN 48.4 MAX 2,190 MIN 1.8 CFSM .84 IN 11.44
WTR YR 1971 TOTAL 22,502.6 MEAN 61.7 MAX 2,190 MIN 1.8 CFSM 1.07 IN 14.58

PEAK DISCHARGE (BASE, 850 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-13	0200	12.82	6,330	2-13	2100	9.06	2,740
12-22	1600	5.82	1,020	5-30	1730	8.50	2,350

01620500 NORTH RIVER NEAR STOKESVILLE, VA.

LOCATION.--Lat 38°20'15", long 79°14'25", Augusta County, on left bank 575 ft upstream from highway bridge, 2.8 miles upstream from city of Staunton dam, 3.8 miles upstream from Broad Run, 5.0 miles west of Stokesville, and 7.8 miles upstream from Skidmore Fork.

DRAINAGE AREA.--17.2 sq mi.

PERIOD OF RECORD.--October 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,054.57 ft above mean sea level. Prior to June 10, 1958, at site 575 ft downstream at datum 6.0 ft lower.

AVERAGE DISCHARGE.--25 years, 24.9 cfs (19.66 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,700 cfs May 30 (gage height, 6.58 ft); minimum, 0.58 cfs Oct. 8-16, 18-20 (gage height, 1.69 ft).

Period of record: Maximum discharge, 11,100 cfs June 17, 1949 (gage height, 10.9 ft, from floodmarks, site and datum then in use), from rating curve extended above 900 cfs on basis of computation of peak flow over dam; minimum, 0.10 cfs Sept. 15, 16, 19-22, 1962, Sept. 7-13, 1966.

Flood in October 1942 reached a stage of 8.4 ft, from information by local resident.

REMARKS.--Records fair. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1903: 1960. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	50	15	25	8.0	48	21	8.5	124	14	6.6	1.4
2	.90	110	14	22	8.0	45	20	8.6	83	13	15	1.4
3	.90	90	13	18	8.0	45	19	8.6	56	9.8	12	1.4
4	.80	150	13	29	8.0	50	18	8.1	40	8.3	12	1.4
5	.72	94	13	197	11	45	16	7.7	31	7.1		1.3
6	.72	91	13	160	16	40	16	7.6	27	6.6	17	1.3
7	.65	88	12	101	15	45	18	7.6	22	6.6	14	1.4
8	.65	79	11	87	14	70	22	8.4	21	5.7	11	1.4
9	.58	57	10	78	15	56	28	7.9	19	5.3	8.3	1.3
10	.58	46	10	56	13	43	32	7.5	18	5.7	6.1	1.2
11	.58	152	9.6	44	11	35	28	7.2	18	6.1	5.7	1.3
12	.58	210	10	37	9.5	29	25	7.5	18	6.1	6.1	1.8
13	.65	139	11	33	125	26	23	13	18	5.3	4.9	7.1
14	.58	94	10	32	137	30	22	22	17	4.9	3.9	7.6
15	.65	79	9.2	35	73	34	20	27	24	4.5	3.4	11
16	.65	61	9.2	34	45	35	18	41	59	4.2	3.0	7.6
17	.65	47	10	34	32	32	17	53	64	3.9	2.8	7.1
18	.65	37	11	33	31	27	16	50	57	3.6	2.8	6.6
19	.58	30	11	31	42	26	15	41	44	3.6	3.6	9.8
20	.72	30	13	28	100	28	14	35	34	4.2	3.4	73
21	2.0	44	16	26	105	25	13	65	27	3.9	3.0	88
22	2.8	46	61	21	150	24	13	65	27	3.4	2.6	67
23	3.3	41	106	20	120	25	13	51	26	3.2	2.6	51
24	2.8	35	88	18	90	24	12	39	26	3.2	2.4	37
25	1.2	28	79	16	70	23	12	31	22	3.0	2.2	23
26	.90	24	58	16	60	22	11	24	18	2.8	2.1	16
27	.70	21	43	14	55	22	10	20	14	2.4	1.8	12
28	.90	18	35	11	50	23	9.9	17	12	2.1	1.8	14
29	.80	16	30	12	------	25	9.4	44	12	2.1	1.8	14
30	.90	16	26	14	------	23	9.0	758	17	2.1	1.7	12
31	100	------	25	9.8	------	22	------	245	------	3.0	1.6	------
TOTAL	129.99	2,023	795.0	1,291.8	1,421.5	1,047	520.3	1,736.2	995	159.7	184.2	480.4
MEAN	4.19	67.4	25.6	41.7	50.8	33.8	17.3	56.0	33.2	5.15	5.94	16.0
MAX	100	210	106	197	150	70	32	758	124	14	19	88
MIN	.58	16	9.2	9.8	8.0	22	9.0	7.2	12	2.1	1.6	1.2
CFSM	.24	3.92	1.49	2.42	2.95	1.97	1.01	3.26	1.93	.30	.35	.93
IN.	.28	4.38	1.72	2.79	3.07	2.26	1.13	3.76	2.15	.35	.40	1.04

CAL YR 1970 TOTAL 8,212.69 MEAN 22.5 MAX 210 MIN .58 CFSM 1.31 IN 17.76
WTR YR 1971 TOTAL 10,784.09 MEAN 29.5 MAX 758 MIN .58 CFSM 1.72 IN 23.32

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-11	2200	3.26	289	2-13	1645	3.13	240
1- 5	1015	3.08	223	5-30	1115	6.58	1,700

01622000 NORTH RIVER NEAR BURKETOWN, VA.

LOCATION.--Lat 38°20'25", long 78°54'50", Rockingham County, on right bank 0.8 mile downstream from Pleasant Run, 2.8 miles northeast of Burketown, and 8.5 miles upstream from Middle River.

DRAINAGE AREA.--379 sq mi.

PERIOD OF PECORD.--October 1925 to current year. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 1,103.49 ft above mean sea level. Prior to Dec. 12, 1938, non-recording gage at site 3.0 miles downstream at different datum.

AVERAGE DISCHARGE.--46 years, 359 cfs (12.86 inches per year).

EXTREMES.--Current year: Maximum discharge, 10,200 cfs May 30 (gage height, 14.26 ft); minimum, 51 cfs Oct. 17, 18 (gage height, 1.92 ft).

Period of record: Maximum discharge, 62,600 cfs June 18, 1949 (gage height, 36.3 ft, from floodmarks), from rating curve extended above 16,000 cfs on basis of one slope-area measurement at gage height 32.4 ft, two at gage height 36.3 ft, and one contracted-opening measurement at gage height 36.3 ft; minimum, 16 cfs Nov. 23, 1965, result of temporary dam upstream.

Maximum stage since at least 1852, that of June 18, 1949.

REMARKS.--Records good. Occasional diurnal fluctuation at low flow caused by mills above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1171: 1936(M). WSP 1302: 1928-29(M), 1932-34(M), 1937-38(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	1,440	234	326	251	712	349	177	3,000	263	136	78
2	60	1,200	220	300	200	673	342	175	1,990	249	124	77
3	58	1,400	210	266	225	754	336	171	1,210	210	113	77
4	54	1,700	204	277	241	822	317	163	860	191	137	76
5	56	1,430	190	1,310	566	727	298	158	659	181	147	77
6	56	1,170	187	2,030	463	733	297	154	538	245	114	82
7	56	947	178	1,400	369	820	372	152	513	202	114	80
8	56	775	172	1,030	374	973	400	170	469	172	111	79
9	56	625	168	797	373	910	452	157	374	163	108	75
10	54	517	162	638	306	793	614	146	327	166	105	74
11	56	815	153	535	315	699	700	142	295	182	108	80
12	58	1,770	162	470	507	606	636	140	315	167	142	224
13	58	1,390	165	436	4,760	542	553	210	337	148	105	320
14	56	1,020	153	461	3,030	498	488	276	295	139	102	213
15	58	914	150	543	1,710	491	436	315	282	133	100	223
16	56	800	147	492	1,210	502	397	434	356	131	97	197
17	54	680	178	468	912	493	366	551	420	126	98	204
18	54	571	177	451	769	466	342	567	416	123	100	171
19	54	481	180	405	718	468	311	512	378	125	102	165
20	56	445	187	362	915	483	288	525	360	129	97	232
21	106	490	222	344	1,270	447	273	1,620	367	117	95	352
22	94	503	594	334	1,370	420	260	1,180	302	113	95	293
23	64	499	1,250	366	1,970	405	245	871	366	108	93	253
24	58	449	1,130	340	1,720	389	239	671	382	107	89	233
25	56	393	873	321	1,330	370	228	534	291	107	85	206
26	56	347	703	338	1,050	373	214	433	263	104	83	197
27	56	313	565	297	902	362	202	362	239	103	87	185
28	54	287	469	240	784	361	203	318	225	98	101	180
29	58	262	398	265	------	356	191	361	253	97	85	167
30	139	252	350	313	------	351	183	5,510	354	100	80	157
31	685	------	327	306	------	351	------	5,320	------	109	79	------
TOTAL	2,552	23,885	10,458	16,461	28,610	17,350	10,532	22,475	16,436	4,608	3,232	5,027
MEAN	82.3	796	337	531	1,022	560	351	725	548	149	104	168
MAX	685	1,770	1,250	2,030	4,760	973	700	5,510	3,000	263	147	352
MIN	54	252	147	240	200	351	183	140	225	97	79	74
CFSM	.22	2.10	.89	1.40	2.70	1.48	.93	1.91	1.45	.39	.27	.44
IN.	.25	2.34	1.03	1.62	2.81	1.70	1.03	2.21	1.61	.45	.32	.49

CAL YR 1970	TOTAL 120,224	MEAN 351	MAX 2,650	MIN 54	CFSM .93	IN 12.59
WTR YR 1971	TOTAL 161,626	MEAN 443	MAX 5,510	MIN 54	CFSM 1.17	IN 15.86

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	1600	13.57	9,330	5-30	1730	14.26	10,200

01624300 MIDDLE RIVER NEAR VERONA, VA.

LOCATION.--Lat 38°14'36", long 79°02'08", Augusta County, on right bank at downstream side of bridge on State Highway 742, 2.7 miles downstream from Moffett Creek, and 3.2 miles northwest of Verona.

DRAINAGE AREA.--178 sq mi.

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,260.78 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 7,220 cfs May 30 (gage height, 13.79 ft), from rating curve extended above 4,200 cfs; minimum, 23 cfs Oct. 3, 4 (gage height, 0.90 ft).

Period of record: Maximum discharge, 7,220 cfs May 30, 1971 (gage height, 13.79 ft), from rating curve extended above 4,200 cfs; minimum, 19 cfs Sept. 21, 29, 1968; minimum gage height, 0.90 ft Oct. 3, 4, 1970.

REMARKS.--Records good. Diurnal fluctuation at low flow caused by mill above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	410	106	122	113	260	153	97	870	168	93	50
2	33	278	106	120	102	250	149	96	620	152	88	48
3	36	365	103	122	95	290	145	97	480	125	77	46
4	31	380	100	125	113	365	137	94	390	117	86	48
5	36	425	96	966	296	324	132	92	342	109	135	47
6	32	332	92	874	349	337	137	94	315	120	101	48
7	31	248	87	455	213	380	180	96	292	125	93	49
8	31	192	85	332	187	395	288	103	278	111	68	49
9	31	151	82	278	201	337	380	97	248	104	69	45
10	34	140	81	238	151	296	365	92	218	130	70	44
11	36	497	78	211	156	268	301	90	206	123	70	51
12	37	721	82	199	318	238	263	90	206	111	69	66
13	33	365	88	192	2,940	218	226	119	194	103	65	62
14	31	253	85	209	1,470	201	199	221	173	101	65	63
15	32	218	82	270	545	192	180	206	211	95	63	55
16	33	192	85	240	395	185	163	280	278	96	62	42
17	29	168	98	228	311	163	151	365	248	93	63	54
18	32	146	116	209	276	163	143	280	216	86	63	55
19	36	133	124	180	260	170	140	226	192	88	64	50
20	33	130	122	148	324	192	133	292	192	92	62	60
21	51	148	130	151	365	180	127	898	208	84	60	75
22	62	151	414	146	395	173	124	500	180	78	58	60
23	45	146	560	151	806	168	121	337	173	74	58	62
24	33	130	380	148	545	158	117	266	182	72	56	54
25	36	119	286	143	410	151	113	221	164	72	54	46
26	39	111	240	148	337	153	105	189	152	74	53	50
27	36	103	201	132	314	149	106	161	143	73	53	50
28	36	98	170	114	283	158	106	161	131	70	54	51
29	37	92	151	110	------	165	102	294	127	69	53	50
30	89	98	135	141	------	165	100	4,700	138	182	52	50
31	456	------	123	143	------	161	------	2,180	------	96	51	------
TOTAL	1,581	6,940	4,688	7,245	12,270	7,005	5,090	13,034	7,767	3,193	2,128	1,580
MEAN	51.0	231	151	234	438	226	170	420	259	103	68.6	52.7
MAX	456	721	560	966	2,940	395	380	4,700	870	182	135	75
MIN	29	92	78	110	95	149	100	90	127	69	51	42
CFSM	.29	1.30	.85	1.31	2.46	1.27	.96	2.36	1.46	.58	.39	.30
IN.	.33	1.45	.98	1.51	2.56	1.46	1.06	2.72	1.62	.67	.44	.33

CAL YR 1970 TOTAL 49,417 MEAN 135 MAX 1,050 MIN 29 CFSM .76 IN 10.33
WTR YR 1971 TOTAL 72,521 MEAN 199 MAX 4,700 MIN 29 CFSM 1.12 IN 15.16

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-11	2400	4.65	1,050	5-20	2330	5.95	1,730
1- 5	2030	5.65	1,520	5-30	1500	13.79	7,220
2-13	2000	10.60	4,630				

01624800 CHRISTIANS CREEK NEAR FISHERSVILLE, VA.

LOCATION.--Lat 38°07'42", long 78°59'41", Augusta County, on right bank at upstream side of bridge on State Highway 794, 2.2 miles northwest of Fishersville, and 5.6 miles upstream from mouth.

DRAINAGE AREA.--70.1 sq mi.

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,230 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 3,240 cfs May 30 (gage height, 11.79 ft), from rating curve extended above 2,100 cfs on basis of velocity-area study; minimum, 10 cfs Oct. 4 (gage height, 1.05 ft).

Period of record: Maximum discharge, 3,800 cfs Aug. 20, 1969 (gage height, 12.78 ft), from rating curve extended above 2,100 cfs on basis of velocity-area study; minimum, 4.3 cfs Jan. 11, 1969 (gage height, 0.90 ft), result of freezeup.

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

DISCHARGE, IN CUBIC FEET PER SECCND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	59	40	41	40	86	48	47	324	52	32	23
2	12	39	36	47	42	87	47	49	246	49	42	23
3	12	90	34	68	45	282	46	50	201	45	35	23
4	12	100	32	107	51	260	44	47	211	42	81	22
5	12	159	30	327	225	148	43	44	158	42	72	21
6	12	80	29	268	148	133	52	45	296	43	42	21
7	12	55	27	162	76	121	99	49	259	44	36	24
8	12	45	27	120	73	100	163	59	164	39	33	23
9	12	39	27	103	68	91	157	47	118	41	32	20
10	13	47	28	94	57	88	122	44	102	86	30	20
11	27	278	27	94	85	85	101	43	92	133	30	26
12	15	137	35	114	249	78	92	43	88	50	30	47
13	13	87	34	114	1,050	74	85	88	84	46	28	54
14	12	69	30	258	264	71	77	59	77	42	27	32
15	14	88	27	177	138	71	72	52	104	39	26	27
16	13	66	30	114	112	66	71	139	170	41	26	24
17	12	55	63	98	99	61	68	78	108	37	27	24
18	12	51	50	89	93	59	68	61	87	35	35	25
19	12	48	43	74	103	67	63	55	77	36	32	31
20	13	59	38	69	122	65	62	136	118	39	27	46
21	56	65	58	66	108	57	61	460	118	35	26	34
22	35	53	179	67	192	56	59	133	77	34	27	30
23	19	52	116	77	270	53	58	100	73	33	26	30
24	16	43	94	68	143	51	58	85	67	32	23	28
25	15	38	72	68	117	50	54	75	61	33	23	25
26	15	37	63	72	105	55	51	67	58	34	24	27
27	15	37	55	51	118	57	51	62	54	33	32	26
28	15	36	51	45	92	63	55	64	52	32	34	24
29	17	33	47	43	------	59	50	668	64	33	25	24
30	71	50	43	49	------	52	48	2,020	67	37	25	24
31	122	------	40	45	------	49	------	555	------	35	24	------
TOTAL	660	2,095	1,505	3,189	4,285	2,695	2,125	5,524	3,775	1,352	1,012	828
MEAN	21.3	69.8	48.5	103	153	86.9	70.8	178	126	43.6	32.6	27.6
MAX	122	278	179	327	1,050	282	163	2,020	324	133	81	54
MIN	12	33	27	41	40	49	43	43	52	32	23	20
CFSM	.30	1.00	.69	1.47	2.18	1.24	1.01	2.54	1.80	.62	.47	.39
IN.	.35	1.11	.80	1.69	2.27	1.43	1.13	2.93	2.00	.72	.54	.44

CAL YR 1970 TOTAL 17,583 MEAN 48.2 MAX 320 MIN 11 CFSM .69 IN 9.33
WTR YR 1971 TOTAL 29,045 MEAN 79.6 MAX 2,020 MIN 12 CFSM 1.14 IN 15.41

PEAK DISCHARGE (BASE, 680 CFS, REVISED)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	1600	9.58	2,180	5-30	0700	11.79	3,240
5-21	0030	7.60	1,420	6- 6	1600	5.99	945

01625000 Middle River near Grottoes, Va.

LOCATION.--Lat 38°15'42", long 78°51'44", Augusta County, on left bank at upstream side of bridge on State Highway 769 at Mount Meridian, 1.8 miles upstream from mouth, and 2.0 miles west of Grottoes.

DRAINAGE AREA.--375 sq mi.

PERIOD OF RECORD.--April 1927 to current year. Records for February 1925 to September 1926, published in WSP 601 and 621, are unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 1,061.51 ft above mean sea level. Prior to Sept. 1, 1938, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--44 years, 294 cfs (10.65 inches per year).

EXTREMES.--Current year: Maximum discharge, 11,200 cfs May 30 (gage height, 18.70 ft); minimum, 47 cfs Oct. 5 (gage height, 3.53 ft).

Period of record: Maximum discharge, 24,500 cfs Mar. 18, 1936 (gage height, 28.57 ft, from floodmarks), from rating curve extended above 15,000 cfs; minimum observed, 22 cfs Sept. 21, Oct. 3, 12, 1930 (gage height, 1.90 ft).

Maximum stage since at least 1877, that of Mar. 18, 1936.

REMARKS.--Records good. Small diurnal fluctuation at low flow caused by mills above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1051: 1928-29, 1930(M), 1932, 1935-37, 1938(M), 1940. WSP 1171: 1933. WSP 1302: 1928-29(M), 1931-34(M). WRD Va. 1970: Drainage area. See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	709	227	240	241	458	271	172	1,790	264	164	111
2	56	535	216	290	164	435	261	171	1,110	537	161	110
3	55	595	209	280	210	746	255	174	862	270	193	108
4	54	760	203	250	240	1,190	242	173	806	243	279	107
5	51	1,150	188	700	303	735	231	164	667	231	362	105
6	54	718	182	2,020	1,010	655	235	162	617	248	228	105
7	52	474	174	1,030	405	645	332	164	985	277	186	105
8	54	337	166	680	334	651	544	185	701	234	168	147
9	54	265	166	522	382	578	693	177	529	217	145	112
10	54	235	166	445	307	509	603	161	440	236	145	105
11	56	1,170	160	399	307	463	499	155	391	613	142	110
12	113	1,530	176	412	521	416	419	151	388	264	148	167
13	63	900	211	447	3,250	382	366	209	391	212	138	190
14	57	563	182	627	4,350	356	326	258	374	194	133	149
15	59	539	170	952	1,170	335	293	281	422	183	130	136
16	60	432	168	568	757	326	276	377	910	181	128	123
17	57	358	271	451	591	303	263	499	663	180	129	116
18	56	314	262	409	510	285	255	408	478	167	133	125
19	56	283	249	354	477	298	239	318	410	161	149	126
20	58	288	241	301	547	337	230	286	360	168	133	173
21	96	361	261	294	663	309	224	1,820	457	161	126	158
22	235	311	786	283	747	295	220	995	376	153	123	150
23	104	295	1,110	318	1,700	288	210	582	354	151	123	132
24	76	269	813	310	1,100	276	207	426	329	145	120	134
25	65	242	551	288	780	269	200	349	319	144	114	121
26	64	227	440	313	633	275	192	299	293	144	113	118
27	65	220	358	270	616	282	185	262	278	145	122	122
28	64	213	305	199	526	292	187	245	265	142	157	117
29	64	201	274	217	------	292	186	487	256	141	125	115
30	166	213	253	300	------	287	176	7,840	272	263	115	113
31	960	------	254	331	------	278	------	7,150	------	205	113	------
TOTAL	3,134	14,707	9,392	14,500	22,881	13,246	8,820	25,100	16,493	6,874	4,745	3,810
MEAN	101	490	303	468	817	427	294	810	550	222	153	127
MAX	960	1,530	1,110	2,020	4,350	1,190	693	7,840	1,790	613	362	190
MIN	51	201	160	199	164	269	176	151	256	141	113	105
CFSM	.27	1.31	.81	1.25	2.18	1.14	.78	2.16	1.47	.59	.41	.34
IN.	.31	1.46	.93	1.44	2.27	1.31	.87	2.49	1.64	.68	.47	.38

CAL YR 1970 TOTAL 91,601 MEAN 251 MAX 2,700 MIN 51 CFSM .67 IN 9.09
WTR YR 1971 TOTAL 143,702 MEAN 394 MAX 7,840 MIN 51 CFSM 1.05 IN 14.26

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1- 6	0300	9.10	2,640	5-21	0930	9.43	2,870
2-14	0400	14.39	7,070	5-30	1900	18.70	11,200

01626000 SOUTH RIVER NEAR WAYNESBORO, VA.

LOCATION.--Lat 38°03'27", long 78°54'30", Waynesboro City, on right bank 80 ft downstream from bridge on State Highway 664, 1.3 miles southwest of post office at Waynesboro, and 2.4 miles downstream from Back Creek.

DRAINAGE AREA.--127 sq mi, of which 41 sq mi is above flood-detention structures.

PERIOD OF RECORD.--October 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,296.20 ft above mean sea level.

AVERAGE DISCHARGE.--19 years, 121 cfs (12.94 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,690 cfs May 30 (gage height, 9.99 ft), from rating curve extended as explained below; minimum, 25 cfs Oct. 2-8 (gage height, 2.42 ft).

Period of record: Maximum discharge, 17,400 cfs Aug. 20, 1969 (gage height, 15.27 ft), from rating curve extended above 4,200 cfs on basis of contracted-opening measurement at gage height 13.95 ft; minimum, 7.0 cfs July 18, 1966; minimum daily, 17 cfs Aug. 8, 1966.

Flood in October 1942 reached a stage of 14.3 ft, from floodmarks (discharge, 14,500 cfs).

REMARKS.--Records good. Flow from 41 sq mi above station slightly regulated by flood-detention reservoirs (sixteen of which were built by Soil Conservation Service between 1954 and 1961). Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	357	93	86	63	186	135	106	1,400	85	53	43
2	26	197	75	90	60	184	133	104	930	83	52	43
3	26	261	72	83	68	231	129	106	624	79	51	42
4	26	236	61	88	70	287	120	102	1,020	75	57	42
5	26	236	57	407	106	247	116	96	544	72	79	42
6	26	234	57	431	153	234	131	94	417	70	61	42
7	26	193	52	290	106	224	159	96	374	75	56	41
8	26	159	51	226	108	204	175	108	275	70	53	41
9	26	131	51	193	112	186	351	96	234	67	51	41
10	27	127	51	172	92	179	688	88	204	90	49	41
11	29	770	49	157	102	172	588	85	164	125	49	44
12	28	708	54	148	133	161	463	83	170	90	49	50
13	28	445	57	146	833	153	394	197	170	77	48	79
14	29	272	51	150	1,040	146	334	231	155	72	46	56
15	30	278	48	175	452	142	284	193	150	67	46	49
16	32	224	54	153	338	135	249	287	207	68	46	45
17	31	175	116	142	269	127	224	309	207	68	46	44
18	31	150	133	135	229	122	207	249	164	61	48	43
19	31	133	125	118	209	137	186	209	146	60	50	44
20	33	164	112	106	209	161	172	193	139	60	46	76
21	48	200	110	110	202	142	164	390	135	58	45	69
22	48	170	142	104	214	135	155	331	125	55	45	62
23	32	157	155	110	364	131	146	255	120	54	44	57
24	28	133	153	104	322	125	139	221	116	53	43	54
25	28	116	137	100	264	118	131	200	108	53	42	50
26	28	106	129	102	234	127	127	177	100	54	42	48
27	29	98	116	77	229	122	120	157	96	53	60	47
28	29	92	104	70	204	135	125	155	92	52	67	45
29	30	85	94	79	------	159	118	572	88	52	50	45
30	150	90	86	98	------	150	110	4,430	96	52	45	43
31	752	------	85	86	------	142	------	2,630	------	53	44	------
TOTAL	1,765	6,697	2,720	4,536	6,825	5,104	6,573	12,550	8,790	2,103	1,563	1,468
MEAN	56.9	223	87.7	146	244	165	219	405	293	67.8	50.4	48.9
MAX	752	770	155	431	1,040	287	688	4,430	1,400	125	79	79
MIN	26	85	48	70	60	118	110	83	88	52	42	41
CFSM	.45	1.76	.69	1.15	1.92	1.30	1.72	3.19	2.31	.53	.40	.39
IN.	.52	1.96	.80	1.33	2.00	1.50	1.93	3.68	2.57	.62	.46	.43

CAL YR 1970 TOTAL 41,777 MEAN 114 MAX 770 MIN 25 CFSM .90 IN 12.24
WTR YR 1971 TOTAL 60,694 MEAN 166 MAX 4,430 MIN 26 CFSM 1.31 IN 17.78

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	0500	5.70	1,150	5-30	0900	9.99	5,690
11-11	1630	5.60	1,100	6- 4	0130	6.24	1,500
2-13	2130	6.46	1,670				

01627500 SOUTH RIVER AT HARRISTON, VA.

LOCATION.--Lat 38°13'07", long 78°50'13", Augusta County, on left bank 100 ft downstream from bridge on State Highway 778, 0.3 mile northwest of Harriston, 0.6 mile downstream from Paine Run, and 7.2 miles upstream from confluence with North River.

DRAINAGE AREA.--222 sq mi.

PERIOD OF RECORD.--February 1925 to September 1951, October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,129.87 ft (corrected) above mean sea level. Prior to Sept. 1, 1938, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--29 years, 236 cfs (14.44 inches per year).

EXTREMES.--Current year: Maximum discharge, 9,460 cfs May 30 (gage height, 11.93 ft), from rating curve extended above 7,300 cfs; minimum daily, 57 cfs Oct. 26; minimum gage height, 2.33 ft Aug. 26.

Period of record: Maximum discharge, 23,100 cfs Oct. 15, 1942 (gage height, 17.2 ft), from rating curve extended above 7,300 cfs; minimum, 17 cfs Nov. 14, 1941; minimum gage height, 2.20 ft Oct. 31, Nov. 3, 4, 9, 1968.

Floods in 1870 and 1877 reached a stage of about 18.8 ft, from information by observer in 1925.

REMARKS.--Records good except those for period of no gage-height record, which are fair. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1171: 1926(M), 1927-28, 1929-32(M), 1933, 1934(M), 1935, 1937. WSP 1302: 1937(M), 1938(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	1,360	143	165	134	355	228	182	2,060	170	104	85
2	62	736	137	172	128	345	222	178	1,400	165	102	85
3	62	440	137	162	130	443	219	178	1,100	152	98	85
4	62	498	139	160	134	595	207	172	1,700	145	118	84
5	62	440	126	532	170	511	195	165	1,040	141	137	82
6	60	460	124	795	255	467	213	165	770	139	120	80
7	60	449	120	590	195	439	289	165	745	139	104	80
8	60	400	116	443	192	395	320	185	570	134	100	79
9	60	340	114	370	222	359	546	170	459	130	94	79
10	60	280	112	330	192	337	1,160	158	388	143	93	80
11	63	726	108	296	201	323	1,000	145	345	190	93	89
12	58	1,390	120	275	246	299	795	145	323	170	93	100
13	58	848	126	269	895	286	670	278	320	143	89	175
14	59	560	116	258	1,750	269	570	377	296	132	87	116
15	60	545	110	313	916	255	475	323	309	126	84	98
16	61	467	112	289	620	246	419	463	427	128	84	93
17	62	366	216	269	488	234	377	565	419	124	85	100
18	63	313	262	262	419	222	355	455	341	116	94	91
19	64	272	255	237	377	228	320	366	289	118	96	93
20	72	325	231	207	366	272	292	363	272	114	89	213
21	92	400	219	213	366	246	279	902	265	110	85	155
22	96	306	299	207	381	234	262	670	258	104	84	134
23	84	272	341	207	645	225	243	499	240	102	82	124
24	64	237	337	201	620	213	237	399	231	98	79	116
25	59	201	296	190	516	204	222	348	210	100	78	106
26	57	185	265	198	447	216	210	306	195	100	78	104
27	58	175	234	168	435	216	201	265	185	98	148	100
28	59	160	210	148	391	225	204	252	178	98	202	94
29	62	145	188	152	------	225	198	930	170	98	106	93
30	82	148	172	168	------	252	185	7,220	178	102	93	89
31	400	------	172	170	------	240	------	3,960	------	106	87	------
TOTAL	2,343	13,444	5,657	8,406	11,831	9,376	11,113	20,948	15,683	3,935	3,086	3,102
MEAN	75.6	448	182	271	423	302	370	676	523	127	99.5	103
MAX	400	1,390	341	795	1,750	595	1,160	7,220	2,060	190	202	213
MIN	57	145	108	148	128	204	185	145	170	98	78	79
CFSM	.34	2.02	.82	1.22	1.91	1.36	1.67	3.05	2.36	.57	.45	.46
IN.	.39	2.25	.95	1.41	1.98	1.57	1.86	3.51	2.63	.66	.52	.52

CAL YR 1970 TOTAL 77,255 MEAN 212 MAX 1,400 MIN 57 CFSM .96 IN 12.95
WTR YR 1971 TOTAL 108,924 MEAN 298 MAX 7,220 MIN 57 CFSM 1.34 IN 18.25

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11- 1	UNKNOWN	-	UNKNOWN	4-10	0530	5.09	1,220
11-11	2000	6.40	2,080	5-30	1030	11.93	9,460
2-14	0430	6.54	2,160	6- 4	0800	6.35	2,080

NOTE.--NO GAGE-HEIGHT RECORD OCT. 1 TO NOV. 11.

01628500 SOUTH FORK SHENANDOAH RIVER NEAR LYNNWOOD, VA.

LOCATION.--Lat 38°19'20", long 78°45'30", Rockingham County, on left bank 1.2 miles northeast of Lynnwood, and 3.3 miles downstream from confluence of North and South Rivers.

DRAINAGE AREA.--1,084 sq mi.

PERIOD OF RECORD.--September 1930 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,013.17 ft above mean sea level.

AVERAGE DISCHARGE.--41 years, 943 cfs (11.81 inches per year).

EXTREMES.--Current year: Maximum discharge, 31,700 cfs May 30 (gage height, 19.43 ft), from rating curve extended as explained below; minimum, 175 cfs Oct. 5, 6 (gage height, 2.00 ft).

Period of record: Maximum discharge, 80,000 cfs Oct. 15, 1942 (gage height, 27.2 ft), from rating curve extended above 20,000 cfs on basis of computations of flow over dam at gage heights 23.60 and 27.2 ft; minimum, 32 cfs Sept. 20, 1932 (gage height, 1.63 ft); minimum daily, 93 cfs Sept. 21, 29, 1930.

Maximum stage since at least 1870, that of Oct. 15, 1942.

REMARKS.--Records good. Diurnal fluctuation at low flow prior to 1960 caused by mill at Lynnwood. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1171: 1933(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	196	2,950	698	765	660	1,680	865	523	7,960	707	395	293
2	196	2,390	641	905	510	1,580	835	515	5,000	983	415	293
3	193	2,390	614	875	560	2,000	835	515	3,570	650	415	289
4	186	3,030	578	785	650	2,890	785	500	3,660	569	717	289
5	182	3,220	538	2,080	825	2,200	736	479	2,710	538	775	285
6	182	2,620	523	5,000	2,110	2,050	745	473	2,140	605	493	285
7	186	2,070	500	3,370	1,140	2,040	1,010	473	2,390	736	420	285
8	186	1,670	479	2,490	1,030	2,170	1,340	515	1,990	530	395	313
9	189	1,350	473	1,980	1,130	2,040	1,710	508	1,520	493	370	289
10	186	1,140	467	1,660	915	1,820	2,470	461	1,280	500	355	277
11	186	2,890	461	1,430	915	1,650	2,420	437	1,130	1,020	355	289
12	245	4,650	479	1,330	1,330	1,480	2,060	431	1,090	669	390	420
13	210	3,500	545	1,320	7,170	1,330	1,770	614	1,140	515	355	688
14	193	2,480	479	1,440	9,840	1,230	1,540	935	1,090	479	340	449
15	196	2,230	461	2,150	4,090	1,170	1,330	964	1,080	449	335	437
16	214	1,950	455	1,600	2,880	1,150	1,200	1,260	1,810	443	325	405
17	193	1,640	707	1,370	2,240	1,110	1,100	1,740	1,660	443	330	400
18	186	1,390	785	1,290	1,890	1,050	1,030	1,600	1,370	420	335	380
19	186	1,200	745	1,140	1,720	1,050	935	1,340	1,180	410	360	375
20	189	1,130	717	993	1,880	1,170	865	1,260	1,070	420	345	530
21	245	1,440	745	964	2,410	1,090	825	4,270	1,220	405	325	641
22	493	1,320	1,690	945	2,570	1,010	785	3,250	1,020	390	321	560
23	293	1,260	2,790	1,020	4,290	974	736	2,280	945	375	317	485
24	238	1,140	2,580	1,010	3,670	925	707	1,750	1,090	365	313	455
25	217	993	2,020	925	2,850	885	669	1,420	885	365	301	425
26	207	885	1,670	983	2,370	895	632	1,170	795	365	297	400
27	207	815	1,380	855	2,170	905	596	983	736	360	325	400
28	210	755	1,160	600	1,900	915	596	895	679	355	479	385
29	210	698	1,010	670	------	935	587	1,410	641	350	345	370
30	309	688	895	835	------	925	545	21,300	835	443	313	370
31	2,550	------	855	895	------	885	------	19,500	------	443	301	------
TOTAL	9,059	55,884	28,130	43,675	65,775	43,204	32,259	73,771	53,686	15,795	11,857	11,762
MEAN	292	1,863	907	1,409	2,349	1,394	1,075	2,380	1,790	510	382	392
MAX	2,550	4,650	2,790	5,000	9,840	2,890	2,470	21,300	7,960	1,020	775	688
MIN	182	688	455	600	510	885	545	431	641	350	297	277
CFSM	.27	1.72	.84	1.30	2.17	1.29	.99	2.20	1.65	.47	.35	.36
IN.	.31	1.92	.97	1.50	2.26	1.48	1.11	2.53	1.84	.54	.41	.40

CAL YR 1970 TOTAL 318,574 MEAN 873 MAX 7,270 MIN 182 CFSM .81 IN 10.93
WTR YR 1971 TOTAL 444,857 MEAN 1,219 MAX 21,300 MIN 182 CFSM 1.12 IN 15.27

PEAK DISCHARGE (BASE, 7,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	2200	13.34	14,000	5-30	2100	19.43	31,700

01631000 SOUTH FORK SHENANDOAH RIVER AT FRONT ROYAL, VA.

LOCATION.--Lat 38°54'50", long 78°12'40", Warren County, on left bank 0.7 mile downstream from bridge on State Highway 619, 1.0 mile west of Front Royal, and 3.5 miles upstream from confluence with North Fork.

DRAINAGE AREA.--1,642 sq mi.

PERIOD OF RECORD.--June 1899 to September 1906, September 1930 to current year. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 469.38 ft above mean sea level. June 1899 to July 1906, nonrecording gage at site 1.0 mile upstream at different datum.

AVERAGE DISCHARGE.--48 years, 1,537 cfs (12.71 inches per year).

EXTREMES.--Current year: Maximum discharge, 46,600 cfs May 31 (gage height, 17.86 ft); minimum, 202 cfs Oct. 9 (gage height, 0.86 ft).

Period of record: Maximum discharge, 130,000 cfs Oct. 16, 1942 (gage height, 34.8 ft, from floodmark in gage well), from rating curve extended above 92,000 cfs on basis of slope-area measurement of peak flow; minimum, 59 cfs Jan. 30, 1934 (gage height, 0.56 ft); minimum daily, 103 cfs Sept. 30, 1930.

Maximum stage since at least 1870, that of Oct. 16, 1942.

REMARKS.--Records good. Large diurnal fluctuation at low and medium flow caused by powerplants above station prior to 1954; occasional large diurnal fluctuation thereafter. Water-quality records for the current year are included in this report.

REVISIONS (WATER YEARS).--WSP 951: 1936(M). WSP 1171: 1935(M), 1937(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	292	2,620	1,000	1,220	1,050	2,900	1,260	539	24,100	1,000	713	465
2	281	3,380	1,000	1,280	900	2,610	1,230	876	9,970	1,150	744	438
3	281	3,010	985	1,160	800	2,510	1,220	896	6,910	1,180	715	437
4	281	2,920	931	1,380	876	2,760	1,190	873	5,050	1,100	902	399
5	276	3,720	886	1,870	1,090	3,920	1,160	867	4,900	903	1,540	421
6	281	3,720	850	4,710	1,280	3,210	1,160	826	3,770	826	1,760	415
7	287	2,870	796	6,600	2,220	3,050	1,400	827	2,990	867	1,030	420
8	250	2,260	787	4,570	1,660	2,990	1,840	830	3,040	1,050	870	468
9	255	1,820	769	3,420	1,450	2,990	2,370	855	2,650	903	694	468
10	287	1,550	752	2,690	1,430	2,800	3,280	871	2,150	857	684	447
11	281	1,710	728	2,240	1,370	2,510	4,110	826	1,760	940	636	468
12	250	5,020	760	1,960	1,170	2,260	3,750	783	1,640	1,030	687	674
13	292	7,880	752	1,830	2,320	2,040	3,120	838	1,540	1,220	694	943
14	281	5,080	778	1,910	13,300	1,870	2,630	1,070	1,680	885	642	1,430
15	343	3,790	823	2,220	11,200	1,750	2,250	1,430	1,700	783	587	1,100
16	309	3,210	776	2,920	5,720	1,630	1,960	1,610	1,730	748	533	827
17	276	2,740	1,020	2,230	4,310	1,620	1,760	1,990	2,140	707	526	787
18	287	2,250	1,230	1,950	3,330	1,550	1,660	2,480	2,080	699	532	723
19	292	1,900	1,340	1,800	2,790	1,520	1,530	2,220	1,790	737	532	711
20	287	1,780	1,230	1,600	2,560	1,530	1,450	2,180	1,590	740	524	1,170
21	303	1,820	1,190	1,450	2,620	1,590	1,330	2,480	1,580	695	571	1,440
22	385	1,890	1,560	1,370	3,150	1,560	1,260	5,920	1,460	671	530	1,310
23	431	1,790	2,530	1,350	4,600	1,500	1,220	4,340	1,420	635	498	1,160
24	672	1,670	3,740	1,450	6,350	1,390	1,180	3,070	1,400	613	479	1,020
25	450	1,540	3,380	1,500	5,200	1,350	1,140	2,370	1,400	618	475	850
26	392	1,440	2,660	1,450	4,300	1,300	1,070	1,940	1,260	585	457	767
27	325	1,210	2,180	1,360	3,600	1,300	1,060	1,650	1,120	585	487	784
28	303	1,210	1,840	1,250	3,200	1,310	992	1,440	1,070	590	550	744
29	325	1,110	1,610	1,050	------	1,310	967	1,390	1,020	582	612	690
30	373	1,080	1,410	1,180	------	1,320	962	5,830	988	584	690	654
31	576	------	1,280	1,170	------	1,310	------	41,600	------	621	515	------
TOTAL	10,204	77,990	41,573	64,140	93,846	63,260	51,511	96,117	95,898	25,104	21,409	22,630
MEAN	329	2,600	1,341	2,069	3,352	2,041	1,717	3,101	3,197	810	691	754
MAX	672	7,880	3,740	6,600	13,300	3,920	4,110	41,600	24,100	1,220	1,760	1,440
MIN	250	1,080	728	1,050	800	1,300	962	783	988	582	457	399
CFSM	.20	1.58	.82	1.26	2.04	1.24	1.05	1.89	1.95	.49	.42	.46
IN.	.23	1.77	.94	1.45	2.13	1.43	1.17	2.18	2.17	.57	.49	.51

CAL YR 1970 TOTAL 489,786 MEAN 1,342 MAX 11,500 MIN 250 CFSM .82 IN 11.10
WTR YR 1971 TOTAL 663,682 MEAN 1,818 MAX 41,600 MIN 250 CFSM 1.11 IN 15.04

PEAK DISCHARGE (BASE, 8,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-13	0215	7.04	9,580	5-31	1500	17.86	46,600
2-14	1830	10.46	19,100				

01632000 NORTH FORK SHENANDOAH RIVER AT COOTES STORE, VA.

LOCATION.--Lat 38°38'13", long 78°51'11", Rockingham County, on right bank at Cootes Store, 300 ft upstream from bridge on State Highway 259, and 3.7 miles upstream from Linville Creek.

DRAINAGE AREA.--210 sq mi.

PERIOD OF RECORD.--February 1925 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,051.8 ft above mean sea level (Corps of Engineers bench mark). Prior to Nov. 15, 1937, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--46 years, 181 cfs (11.70 inches per year).

EXTREMES.--Current year: Maximum discharge, 11,300 cfs May 30 (gage height, 13.63 ft), from rating curve extended as explained below; minimum, 3.0 cfs Oct. 16, 18, 19 (gage height, 1.96 ft).

Period of record: Maximum discharge, 50,000 cfs Oct. 15, 1942 (gage height, 25.3 ft, from floodmark), from rating curve extended above 9,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 0.20 cfs Aug. 28, 29, Sept. 4, 1957, Sept. 7-10, 1966; minimum gage height, 1.74 ft Sept. 7-10, 1966.

Maximum stage since at least 1836, that of Oct. 15, 1942.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 726: 1928-31. WSP 951: 1936, 1939(M). WSP 1171: 1935, 1937, 1938(M). WSP 1502: 1926, 1927-28(M), 1929, 1930-34(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	483	72	141	177	376	106	47	1,110	31	39	6.4
2	4.2	366	65	139	150	328	105	45	614	27	91	6.4
3	4.2	1,110	60	115	170	335	104	44	410	24	152	6.0
4	4.0	960	55	179	200	339	95	42	282	21	101	5.8
5	4.0	895	49	2,020	300	301	88	39	211	19	258	5.4
6	4.0	665	47	1,460	219	399	95	38	167	18	111	5.2
7	3.8	416	44	769	182	889	161	37	154	17	63	5.0
8	3.8	276	41	496	173	831	302	40	151	15	42	4.8
9	3.8	202	39	381	160	565	568	38	107	14	34	4.5
10	3.6	168	37	295	111	420	637	35	84	13	28	4.2
11	4.0	560	35	244	137	339	506	33	68	17	29	5.0
12	3.8	1,100	38	229	115	273	386	31	61	19	30	163
13	3.6	660	41	265	3,300	237	306	62	62	15	24	277
14	3.4	443	39	307	2,620	225	251	171	60	12	20	145
15	3.2	443	36	592	885	229	203	149	92	10	18	136
16	3.2	357	36	501	550	237	175	267	91	9.6	26	100
17	3.2	276	54	402	429	226	157	340	88	8.8	26	88
18	3.2	223	100	321	464	199	142	279	80	8.1	21	76
19	3.2	183	114	243	543	203	123	224	69	8.8	20	70
20	3.4	202	116	204	1,030	228	109	192	61	9.4	17	108
21	9.0	285	140	174	1,150	200	99	1,230	64	8.2	15	113
22	17	258	1,910	160	1,010	178	94	643	58	7.1	14	94
23	9.7	232	1,710	183	1,410	165	87	395	57	6.5	14	76
24	8.3	190	894	182	956	155	80	272	70	6.4	12	64
25	8.3	156	600	168	647	140	73	211	57	6.5	11	53
26	7.9	135	447	202	488	137	66	166	46	6.1	9.5	51
27	7.9	121	327	178	446	129	62	133	39	6.1	9.5	49
28	7.6	107	251	161	431	129	59	110	34	5.8	9.7	43
29	8.3	93	195	194	------	125	54	125	39	6.9	8.4	39
30	153	82	161	247	------	120	51	6,520	36	12	7.2	36
31	730	------	148	247	------	112	------	3,700	------	20	6.6	------
TOTAL	1,040.8	11,647	7,901	11,399	18,453	8,773	5,344	15,658	4,522	408.3	1,266.9	1,839.7
MEAN	33.6	388	255	368	659	283	178	505	151	13.2	40.9	61.3
MAX	730	1,110	1,910	2,020	3,300	889	637	6,520	1,110	31	258	277
MIN	3.2	82	35	115	111	112	51	31	34	5.8	6.6	4.2
CFSM	.16	1.85	1.21	1.75	3.14	1.35	.85	2.40	.72	.06	.19	.29
IN.	.18	2.06	1.40	2.02	3.27	1.55	.95	2.77	.80	.07	.22	.33

CAL YR 1970 TOTAL 77,274.9 MEAN 212 MAX 4,770 MIN 3.2 CFSM 1.01 IN 13.69
WTR YR 1971 TOTAL 88,252.7 MEAN 242 MAX 6,520 MIN 3.2 CFSM 1.15 IN 15.63

PEAK DISCHARGE (BASE, 3,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	1845	11.02	7,030	5-30	1615	13.63	11,300

01632900 SMITH CREEK NEAR NEW MARKET, VA.

LOCATION (revised).--Lat 38°41'36", long 78°38'35", Shenandoah County, on left bank 25 ft upstream from bridge on State Highway 616, 3.6 miles north of New Market, and 4.4 miles upstream from mouth.

DRAINAGE AREA.--93.2 sq mi.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 881.50 ft above mean sea level. Prior to Aug. 2, 1963, on right bank a short distance downstream, at datum 0.71 ft higher.

AVERAGE DISCHARGE.--11 years, 59.4 cfs (8.66 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,860 cfs Feb. 13 (gage height, 9.96 ft); minimum daily, 16 cfs Oct. 1-8, 10, 11, 13-19, 27; minimum gage height, 1.41 ft Oct. 4, 5.

Period of record: Maximum discharge, 2,860 cfs Feb. 13, 1971 (gage height, 9.96 ft); minimum, 7.2 cfs Jan. 20, 1966; minimum gage height, 1.34 ft Aug. 4, 1966, July 6, 1969.

Flood of Oct. 1, 1959, reached a stage of 10.7 ft, from information by local residents.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	50	38	82	57	121	66	50	262	74	36	28
2	16	32	36	76	65	116	66	50	180	70	39	28
3	16	54	34	71	60	130	68	50	149	60	36	27
4	16	82	33	68	52	149	64	48	127	56	237	27
5	16	104	32	281	102	140	62	47	112	52	253	27
6	16	84	31	315	134	165	64	47	101	52	76	27
7	16	58	30	187	67	177	98	46	103	56	58	26
8	16	47	29	133	68	152	129	47	216	50	50	25
9	17	40	33	112	89	133	167	46	107	47	46	25
10	16	39	29	98	67	123	156	44	93	60	42	24
11	16	98	29	90	57	117	121	42	84	70	54	27
12	17	153	30	88	150	110	107	40	80	64	92	43
13	16	98	32	86	1,290	104	99	68	84	50	50	200
14	16	80	29	126	600	99	93	101	88	46	45	76
15	16	85	28	244	215	96	86	70	115	44	41	66
16	16	75	29	152	170	91	80	110	102	42	38	56
17	16	63	70	121	148	86	78	116	94	42	38	54
18	16	57	60	104	140	82	76	83	86	40	37	52
19	16	53	51	90	137	87	72	70	78	49	38	50
20	17	61	46	84	154	98	68	62	78	54	38	104
21	21	88	48	75	151	87	68	121	96	44	36	110
22	29	69	242	73	189	83	66	92	74	40	36	78
23	22	61	166	121	346	82	62	76	70	39	35	70
24	19	54	116	102	215	78	60	70	124	39	32	66
25	18	49	90	90	170	74	58	64	74	38	32	62
26	18	48	76	123	152	74	58	58	66	37	31	68
27	16	46	68	88	148	74	54	54	62	37	32	68
28	17	44	60	84	132	78	56	50	58	35	41	62
29	17	41	55	80	------	76	54	58	105	35	33	58
30	24	40	53	73	------	72	52	791	147	38	31	58
31	54	------	50	64	------	68	------	625	------	37	29	------
TOTAL	578	1,953	1,753	3,581	5,320	3,222	2,408	3,296	3,215	1,497	1,712	1,692
MEAN	18.6	65.1	56.5	116	190	104	80.3	106	107	48.3	55.2	56.4
MAX	54	153	242	315	1,290	177	167	791	262	74	253	200
MIN	16	32	28	64	52	68	52	40	58	35	29	24
CFSM	.20	.70	.61	1.24	2.04	1.12	.86	1.14	1.15	.52	.59	.61
IN.	.23	.78	.70	1.43	2.12	1.29	.96	1.32	1.28	.60	.68	.69

CAL YR 1970 TOTAL 22,259 MEAN 61.0 MAX 328 MIN 12 CFSM .65 IN 8.88
WTR YR 1971 TOTAL 30,227 MEAN 82.8 MAX 1,290 MIN 16 CFSM .89 IN 12.06

PEAK DISCHARGE (BASE, 650 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	2030	9.96	2,860	8- 4	2300	6.91	995
5-30	2130	8.34	1,600				

01633000 NORTH FORK SHENANDOAH RIVER AT MOUNT JACKSON, VA.

LOCATION.--Lat 38°44'44", long 78°38'21", Shenandoah County, on downstream side near center of span of bridge on State Highway 698 at Mount Jackson, 0.3 mile downstream from Mill Creek.

DRAINAGE AREA.--506 sq mi.

PERIOD OF RECORD.--October 1943 to current year.

GAGE.--Nonrecording gage and crest-stage gage. Datum of gage is 838.55 ft above mean sea level.

AVERAGE DISCHARGE.--28 years, 348 cfs (9.34 inches per year).

EXTREMES.--Current year: Maximum discharge, 14,600 cfs Feb. 13 (gage height, 14.30 ft); minimum observed, 39 cfs Oct. 8.

Period of record: Maximum discharge, 30,000 cfs Aug. 18, 1955 (gage height, 17.32 ft), from rating curve extended above 18,000 cfs on basis of peak runoff for flood in October 1942 for stations at Cootes Store and near Strasburg; minimum, 7.0 cfs Sept. 3, 1966 (gage height, 1.97 ft).

Flood in October 1942 reached a stage of 20.2 ft, from floodmarks (discharge, about 80,000 cfs), from rating curve extended as explained above.

REMARKS.--Records good. Some diversion during low flow by irrigation at points above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1382: 1945, 1948-50(M), 1951-53(P), 1954(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	565	179	303	366	770	303	166	2,120	186	116	78
2	43	436	166	310	350	710	303	166	1,160	182	153	83
3	45	860	153	282	303	740	303	166	800	153	196	73
4	47	1,100	153	364	303	720	282	156	620	140	663	69
5	45	1,230	134	2,080	460	680	263	153	510	131	1,480	69
6	45	920	131	2,580	620	860	282	146	436	128	366	66
7	43	592	122	1,370	436	1,480	389	146	389	159	237	66
8	39	389	116	920	389	1,400	680	146	620	122	186	64
9	41	303	125	740	350	1,100	980	146	366	116	153	57
10	43	244	116	592	282	860	1,040	134	324	140	140	55
11	43	366	110	510	303	770	860	128	282	366	140	64
12	47	1,670	119	485	345	680	710	122	263	172	244	620
13	51	980	125	538	6,390	592	592	186	263	128	140	650
14	47	710	116	565	4,800	565	510	324	263	113	119	303
15	47	680	110	1,230	1,670	538	436	303	345	107	107	244
16	47	592	140	980	1,160	538	389	436	324	99	143	200
17	43	460	190	770	920	510	366	620	303	96	128	193
18	43	366	207	650	920	460	345	485	282	94	116	166
19	43	324	229	485	980	460	303	389	244	107	110	153
20	47	303	229	436	1,370	538	263	324	244	116	105	324
21	55	460	229	389	1,830	485	263	1,160	263	99	99	412
22	88	389	1,550	366	1,440	436	263	980	244	88	99	263
23	71	366	2,630	538	2,150	436	244	620	218	88	96	237
24	51	303	1,480	510	1,750	389	229	460	389	88	91	207
25	43	282	980	436	1,230	366	218	366	237	88	86	179
26	43	263	770	565	1,040	366	207	324	207	83	88	196
27	43	233	565	495	920	366	186	263	186	83	91	193
28	43	214	460	450	860	345	193	237	169	78	116	172
29	43	193	389	412	------	345	186	229	166	81	94	153
30	78	182	324	485	------	324	176	5,150	345	96	83	146
31	770	------	303	510	------	324	------	6,620	------	150	83	------
TOTAL	2,220	15,975	12,650	21,346	33,937	19,153	11,764	21,251	12,582	3,877	6,068	5,755
MEAN	71.6	533	408	689	1,212	618	392	686	419	125	196	192
MAX	770	1,670	2,630	2,580	6,390	1,480	1,040	6,620	2,120	366	1,480	650
MIN	39	182	110	282	282	324	176	122	166	78	83	55
CFSM	.14	1.05	.81	1.36	2.40	1.22	.77	1.36	.83	.25	.39	.38
IN.	.16	1.17	.93	1.57	2.49	1.41	.86	1.56	.93	.29	.45	.42

CAL YR 1970 TOTAL 138,493 MEAN 379 MAX 3,820 MIN 39 CFSM .75 IN 10.18
WTR YR 1971 TOTAL 166,578 MEAN 456 MAX 6,620 MIN 39 CFSM .90 IN 12.25

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	UNKNOWN	14.30	14,600	5-30	UNKNOWN	13.93	13,400

01634000 NORTH FORK SHENANDOAH RIVER NEAR STRASBURG, VA.

LOCATION.--Lat 38°58'36", long 78°20'11", Warren County, on right bank at downstream side of bridge on State Highway 55, 1.5 miles southeast of Strasburg, 2.2 miles upstream from Cedar Creek, and 10 miles upstream from confluence with South Fork.

DRAINAGE AREA.--768 sq mi.

PERIOD OF RECORD.--March 1925 to current year.

GAGE.--Water-stage recorder. Datum of gage is 494.03 ft above mean sea level. Prior to Sept. 21, 1930, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--46 years, 553 cfs (9.78 inches per year).

EXTREMES.--Current year: Maximum discharge, 15,900 cfs Feb. 14 (gage height, 16.13 ft); minimum, 86 cfs Oct. 19, 20 (gage height, 1.86 ft).

Period of record: Maximum discharge, 100,000 cfs Oct. 16, 1942 (gage height, 31.2 ft, from high-water mark in gage well), from rating curve extended above 46,000 cfs; minimum, 6.0 cfs Feb. 9, 1934 (gage height, 1.52 ft); minimum daily, 41 cfs Sept. 26, Oct. 1, 1930.

Maximum stage since at least 1870, that of Oct. 16, 1942.

REMARKS.--Records good. Prior to 1955, diurnal fluctuation at low flow caused by powerplants and mills above station. Water-quality records for the current year are included in this report.

REVISIONS (WATER YEARS).--WSP 951: 1936(M). WSP 1001: 1931. WSP 1171: 1929(M), 1933(M), 1936-37. WSP 1302: 1928(M), 1930(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	618	299	507	771	1,180	447	307	4,610	456	412	157
2	102	742	283	452	510	1,080	438	302	2,280	349	329	152
3	100	630	267	494	500	1,050	429	301	1,640	329	350	153
4	97	1,120	254	576	600	1,090	422	289	1,290	290	485	158
5	120	1,460	242	847	700	1,100	403	281	1,030	261	1,240	146
6	100	1,380	229	3,370	1,100	1,080	402	274	832	246	1,140	142
7	95	1,060	219	2,460	868	1,350	560	273	754	236	614	145
8	95	768	212	1,610	669	1,920	708	285	702	240	449	142
9	95	582	204	1,190	628	1,680	904	284	799	232	359	137
10	97	480	203	1,000	664	1,330	1,140	284	586	216	303	133
11	97	476	205	836	578	1,130	1,190	253	509	223	310	153
12	100	758	211	750	512	1,000	1,030	253	596	322	388	575
13	97	1,880	210	712	1,970	891	876	309	642	302	355	1,120
14	95	1,290	210	833	12,000	811	765	423	599	241	300	842
15	95	981	211	1,100	3,720	763	678	583	656	213	250	509
16	95	891	204	1,500	2,060	741	615	644	793	200	229	409
17	90	794	259	1,240	1,520	722	571	821	654	191	222	360
18	88	663	279	1,050	1,310	686	549	912	581	187	227	308
19	88	575	352	979	1,320	662	517	748	525	191	223	302
20	88	526	381	854	1,470	674	481	643	493	189	209	289
21	105	498	381	751	2,230	722	444	659	473	198	202	446
22	118	616	625	641	2,250	665	429	1,390	507	202	194	527
23	115	594	2,950	657	2,820	622	409	1,130	429	179	186	432
24	142	544	2,400	812	3,030	593	401	819	421	175	178	374
25	136	489	1,600	781	2,110	563	371	692	538	174	173	336
26	120	433	1,200	721	1,620	535	360	643	429	190	167	318
27	107	395	978	841	1,400	520	365	591	376	226	169	305
28	105	366	793	829	1,290	510	345	442	347	202	177	332
29	105	344	674	577	------	501	337	425	325	327	180	297
30	123	322	588	674	------	490	323	1,350	311	497	185	274
31	139	------	528	724	------	469	------	10,800	------	296	167	------
TOTAL	3,254	22,275	17,651	30,368	50,220	27,130	16,905	27,420	24,727	7,780	10,372	9,973
MEAN	105	743	569	980	1,794	875	564	885	824	251	335	332
MAX	142	1,880	2,950	3,370	12,000	1,920	1,190	10,800	4,610	497	1,240	1,120
MIN	88	322	203	452	500	469	323	253	311	174	167	133
CFSM	.14	.97	.74	1.28	2.34	1.14	.73	1.15	1.07	.33	.44	.43
IN.	.16	1.08	.85	1.47	2.43	1.31	.82	1.33	1.20	.38	.50	.48

CAL YR 1970 TOTAL 206,029 MEAN 564 MAX 4,140 MIN 88 CFSM .73 IN 9.98

WTR YR 1971 TOTAL 248,079 MEAN 680 MAX 12,000 MIN 88 CFSM .89 IN 12.02

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-14	1230	16.13	15,900	5-31	1445	14.99	14,100

01634500 CEDAR CREEK NEAR WINCHESTER, VA.

LOCATION (revised).--Lat 39°04'52", long 78°19'47", Frederick County, on left bank 0.2 mile upstream from Fawcett Run, 0.3 mile upstream from bridge on State Highway 628, 1.3 miles downstream from Froman Run, and 11.4 miles southwest of Winchester.

DRAINAGE AREA.--103 sq mi.

PERIOD OF RECORD.--June 1937 to current year.

GAGE.--Water-stage recorder. Datum of gage is 647.09 ft above mean sea level.

AVERAGE DISCHARGE.--34 years, 82.7 cfs (10.90 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,560 cfs May 30 (gage height, 9.18 ft); maximum gage height, 9.70 ft Feb. 13; minimum discharge, 5.5 cfs Oct. 5, 6 (gage height, 1.20 ft).

Period of record: Maximum discharge, 22,000 cfs Oct. 15, 1942 (gage height, 27.0 ft, from floodmarks), from rating curve extended above 15,000 cfs; minimum, 1.8 cfs Feb. 19, 1941, Dec. 7, 1958, result of freezeups; minimum gage height, 1.04 ft Feb. 19, 1941; minimum daily discharge, 2.8 cfs Sept. 7, 1964, Sept. 3, 4, 7, 8, 1966.

Flood of Mar. 17, 1936, reached a stage of about 25 ft (discharge, about 18,000 cfs), from information by local residents.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	106	44	130	41	220	63	47	540	30	128	14
2	7.1	66	42	150	44	195	62	47	358	29	129	15
3	6.7	130	35	180	50	200	65	50	325	25	268	15
4	6.7	114	40	260	66	202	58	44	233	22	173	14
5	5.9	94	37	660	87	180	55	41	185	21	197	13
6	5.5	66	34	560	110	256	57	42	157	20	126	13
7	5.9	52	32	353	90	484	224	43	132	20	91	13
8	5.9	42	31	242	89	364	247	85	108	20	69	13
9	6.3	36	34	200	112	265	212	106	88	19	55	13
10	6.3	33	32	162	68	217	207	75	78	18	46	12
11	6.7	234	30	140	72	195	175	63	66	17	46	14
12	8.7	462	41	138	94	166	155	58	62	18	96	80
13	10	974	64	140	1,070	150	135	208	79	18	49	254
14	8.7	428	50	188	1,020	137	122	329	90	16	37	180
15	7.9	287	44	306	392	132	105	185	110	15	32	70
16	8.3	190	43	200	268	124	98	333	126	15	29	46
17	7.9	138	270	170	225	108	93	283	98	14	28	44
18	7.9	110	215	140	262	98	94	200	76	13	26	36
19	8.3	96	144	110	304	112	80	159	66	15	25	33
20	9.1	127	109	94	431	166	75	135	62	17	22	52
21	16	198	97	98	473	128	73	207	62	15	20	56
22	39	121	676	108	568	118	70	150	52	14	19	42
23	16	103	532	132	700	112	65	124	269	12	20	38
24	10	83	405	132	462	100	62	106	216	12	18	36
25	9.5	70	268	119	344	91	60	103	84	20	14	35
26	9.1	66	208	155	283	88	56	98	57	47	15	40
27	8.7	62	158	110	304	85	54	82	46	88	16	46
28	8.7	56	126	92	262	84	55	73	38	30	30	38
29	9.1	53	109	96	------	80	54	76	35	28	19	35
30	50	49	90	123	------	75	49	1,730	32	76	16	32
31	32	------	113	85	------	68	------	1,720	------	239	15	------
TOTAL	354.6	4,646	4,157	5,773	8,291	5,000	2,984	7,002	3,930	963	1,874	1,342
MEAN	11.4	155	134	186	296	161	99.5	226	131	31.1	60.5	44.7
MAX	50	974	676	660	1,070	484	247	1,730	540	239	268	254
MIN	5.5	33	30	85	41	68	49	41	32	12	14	12
CFSM	.11	1.50	1.30	1.81	2.87	1.56	.97	2.19	1.27	.30	.59	.43
IN.	.13	1.68	1.50	2.09	2.99	1.81	1.08	2.53	1.42	.35	.68	.48

CAL YR 1970 TOTAL 33,000.6 MEAN 90.4 MAX 974 MIN 5.5 CFSM .88 IN 11.92
WTR YR 1971 TOTAL 46,316.6 MEAN 127 MAX 1,730 MIN 5.5 CFSM 1.23 IN 16.73

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-13	0500	7.59	1,810	5-30	1730	9.18	3,560
12-22	1400	5.79	1,200	6-23	1930	6.00	1,660
2-13	2030	9.70	2,640				

01635500 PASSAGE CREEK NEAR BUCKTON, VA.

LOCATION.--Lat 38°57'29", long 78°16'01", Warren County, on right bank 350 ft upstream from bridge on State Highway 55, 1.2 miles south of Buckton (R. R. station), 1.4 miles upstream from mouth, and 4.2 miles west of Riverton.

DRAINAGE AREA.--87.8 sq mi.

PERIOD OF RECORD.--October 1905 to July 1906 (gage heights only), April 1932 to current year. Prior to October 1966, published as "at Buckton".

GAGE.--Water-stage recorder and concrete control. Datum of gage is 525.14 ft above mean sea level. October 1905 to July 1906, nonrecording gage at site 1 mile downstream at different datum. Apr. 4, 1932, to Oct. 7, 1937, nonrecording gage at site 350 ft downstream at different datum.

AVERAGE DISCHARGE.--39 years (1932-71), 64.6 cfs (9.99 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,230 cfs May 31 (gage height, 9.13 ft, from high-water mark in well); minimum, 1.3 cfs Oct. 20, 21 (gage height, 2.78 ft).

Period of record: Maximum discharge, 21,000 cfs Oct. 15, 1942 (gage height, 15.5 ft), from rating curve extended above 5,200 cfs; minimum observed, 0.1 cfs Aug. 5, 1932.

REMARKS.--Records good except those for period of no gage-height record, which are fair. Occasional diurnal fluctuation during low flow caused by State Fish Hatchery two miles above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	24	20	90	54	128	34	33	2,250	15	17	4.4
2	2.8	15	18	129	50	130	33	33	540	29	23	4.2
3	2.8	31	17	121	52	135	37	37	260	23	20	4.2
4	2.4	49	16	123	54	142	33	33	184	16	30	4.4
5	2.2	61	14	350	62	135	30	27	151	13	50	3.8
6	2.1	31	14	390	73	181	32	26	125	12	32	3.6
7	2.0	19	14	234	86	234	122	24	109	13	19	3.5
8	2.1	15	13	163	84	176	240	29	109	16	14	3.2
9	2.8	13	13	139	130	142	272	42	82	12	12	4.0
10	2.0	12	14	120	105	125	197	33	71	12	10	3.8
11	2.0	82	13	107	90	118	142	27	60	56	15	5.8
12	2.8	200	15	100	115	104	118	24	65	40	16	39
13	2.5	340	19	104	545	96	109	72	86	23	16	78
14	2.5	142	18	139	1,200	90	98	170	104	16	11	34
15	2.5	114	15	276	940	84	84	98	135	13	9.1	21
16	1.8	88	16	132	610	78	76	245	111	11	7.3	15
17	3.6	61	46	147	400	69	72	230	86	9.1	6.5	13
18	1.6	47	57	127	260	63	72	144	65	10	6.2	11
19	2.2	38	43	111	235	65	63	111	55	12	6.2	12
20	1.6	55	37	111	220	76	57	144	46	15	6.2	26
21	4.8	114	37	108	220	65	57	530	94	18	5.4	17
22	13	72	296	109	285	58	55	200	53	13	5.0	15
23	13	55	290	125	440	57	50	142	38	9.1	5.0	13
24	7.8	42	168	135	300	52	49	111	80	7.6	4.0	11
25	5.4	33	132	118	190	47	44	96	43	8.0	3.8	10
26	4.6	31	109	144	155	46	40	78	31	13	3.6	11
27	3.8	28	86	123	140	46	37	61	23	11	4.6	11
28	4.0	25	74	90	130	44	37	55	19	10	5.6	12
29	4.4	23	58	107	------	43	35	58	17	20	8.3	11
30	9.7	22	58	111	------	42	33	170	16	24	6.7	9.7
31	32	------	67	70	------	37	------	2,300	------	16	4.8	------
TOTAL	150.3	1,882	1,807	4,453	7,225	2,908	2,358	5,383	5,108	515.8	383.3	414.6
MEAN	4.85	62.7	58.3	144	258	93.8	78.6	174	170	16.6	12.4	13.8
MAX	32	340	296	390	1,200	234	272	2,300	2,250	56	50	78
MIN	1.6	12	13	70	50	37	30	24	16	7.6	3.6	3.2
CFSM	.06	.71	.66	1.64	2.94	1.07	.90	1.98	1.94	.19	.14	.16
IN.	.06	.80	.77	1.89	3.06	1.23	1.00	2.28	2.16	.22	.16	.18

CAL YR 1970 TOTAL 21,693.0 MEAN 59.4 MAX 407 MIN 1.1 CFSM .68 IN 9.19
WTR YR 1971 TOTAL 32,588.0 MEAN 89.3 MAX 2,300 MIN 1.6 CFSM 1.02 IN 13.81

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-14	UNKNOWN	7.28	1,730	5-31	UNKNOWN	9.13	3,230

NOTE.--NO GAGE-HEIGHT RECORD MAY 30 TO JUNE 3.

01636210 HAPPY CREEK AT FRONT ROYAL, VA.

LOCATION.--Lat 38°54'20", long 78°11'10", Warren County, on left bank 30 ft upstream from highway bridge, 1.0 mile south of Front Royal, 2.3 miles upstream from Leach Run, and 2.9 miles upstream from mouth.

DRAINAGE AREA.--14.0 sq mi.

PERIOD OF RECORD.--June 1948 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 610.12 ft above mean sea level. Prior to Oct. 1, 1949, nonrecording gage at site 0.3 mile downstream at different datum.

AVERAGE DISCHARGE.--23 years, 13.5 cfs (13.10 inches per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 658 cfs May 31 (gage height, 4.24 ft); minimum, 0.53 cfs Oct. 20 (gage height, 1.25 ft).

Period of record: Maximum discharge observed, 2,490 cfs Oct. 5, 1948 (gage height, 6.40 ft, site and datum then in use), from rating curve extended above 120 cfs; no flow during several periods between Aug. 25 and Sept. 4, 1953.

Flood in October 1942 reached a stage of about 14 ft, site and datum in use 1948-49, from information by local residents.

REMARKS.--Records good. Some diversion above station for Front Royal municipal water supply. Moderate diurnal fluctuation caused by municipal reservoir operation. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	31	14	18	12	30	11	9.9	129	8.4	3.0	2.1
2	1.7	17	13	19	9.5	29	12	12	79	7.6	5.4	2.1
3	1.7	69	12	16	9.0	30	12	11	59	6.9	9.4	1.9
4	1.4	49	12	22	11	30	10	9.5	46	6.1	30	1.7
5	1.3	38	11	45	17	29	9.7	7.8	37	5.5	12	1.5
6	1.3	24	11	44	15	35	12	9.0	33	5.8	6.1	1.6
7	1.3	17	10	33	12	43	23	9.0	28	6.5	4.1	2.1
8	1.2	13	10	27	16	38	48	15	25	5.0	3.3	1.4
9	1.3	11	9.5	24	15	33	90	14	22	4.7	2.5	1.3
10	1.6	18	9.5	21	14	30	103	12	20	5.5	2.2	1.1
11	1.6	123	11	19	12	28	70	11	18	5.5	4.2	3.4
12	1.9	167	14	19	18	25	52	10	26	5.8	4.4	35
13	1.7	151	16	18	157	23	41	25	39	4.7	2.5	26
14	1.7	78	11	21	108	21	32	24	32	4.2	2.0	13
15	1.6	77	6.4	26	57	19	27	21	29	3.7	1.9	7.8
16	1.9	55	16	23	40	17	24	54	26	3.3	1.7	5.2
17	1.7	39	66	22	31	16	23	47	22	3.1	1.8	7.3
18	1.6	31	39	19	29	15	22	33	19	3.1	1.8	4.5
19	1.4	25	30	18	31	22	18	26	16	5.2	2.5	6.3
20	.72	34	24	16	46	21	17	62	15	4.0	1.8	23
21	12	29	24	16	50	18	16	109	14	2.7	1.6	12
22	10	25	61	15	63	18	15	59	13	2.4	1.4	8.6
23	3.1	23	59	20	78	18	15	41	12	2.2	1.8	7.1
24	2.2	20	47	18	64	16	14	31	11	2.0	1.5	5.7
25	1.9	18	35	18	52	15	13	27	10	2.6	1.1	4.3
26	2.2	17	29	21	42	15	12	22	9.2	2.2	1.1	5.3
27	2.2	16	24	18	39	14	12	19	8.4	2.4	16	4.5
28	1.6	15	21	13	33	14	12	17	8.0	2.2	8.7	3.9
29	1.7	15	18	16	------	14	11	27	8.4	1.8	3.4	3.3
30	36	14	16	21	------	12	10	351	8.4	3.4	2.4	3.0
31	95	------	14	16	------	11	------	361	------	4.6	2.0	------
TOTAL	198.12	1,259	693.4	662	1,080.5	699	786.7	1,486.2	822.4	133.1	143.6	206.0
MEAN	6.39	42.0	22.4	21.4	38.6	22.5	26.2	47.9	27.4	4.29	4.63	6.87
MAX	95	167	66	45	157	43	103	361	129	8.4	30	35
MIN	.72	11	6.4	13	9.0	11	9.7	7.8	8.0	1.8	1.1	1.1
(*)	.24	.83	.50	.73	.70	.89	.82	.83	.79	.61	.61	.77
MEAN‡	6.63	42.8	22.9	22.1	39.3	23.4	27.0	48.7	28.2	4.90	5.24	7.64
CFSM‡	.47	3.06	1.64	1.58	2.81	1.67	1.93	3.48	2.01	.35	.37	.55
IN.‡	.54	3.41	1.89	1.82	2.93	1.92	2.15	4.01	2.24	.40	.43	.61

CAL YR 1970 TOTAL 6,072.23 MEAN 16.6 MAX 167 MIN .53 MEAN‡ 17.4 CFSM‡ 1.24 IN.‡ 16.90
WTR YR 1971 TOTAL 8,170.02 MEAN 22.4 MAX 361 MIN .72 MEAN‡ 23.1 CFSM‡ 1.65 IN.‡ 22.38

* DIVERSION, IN CUBIC FEET PER SECOND, BY CITY OF FRONT ROYAL.
‡ ADJUSTED FOR DIVERSION.

01636500 SHENANDOAH RIVER AT MILLVILLE, W. VA.

LOCATION.--Lat 39°16'55", long 77°47'22", Jefferson County, on left bank 0.4 mile downstream from Cattail Run, 1.0 mile upstream from Millville, 5.0 miles upstream from Harpers Ferry, and at mile 5.0.

DRAINAGE AREA.--3,040 sq mi.

PERIOD OF RECORD.--April 1895 to March 1909, August 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 293.00 ft above mean sea level, adjustment of 1912. Apr. 15, 1895, to Mar. 31, 1909, nonrecording gage at site 0.8 mile downstream at datum 0.32 ft higher.

AVERAGE DISCHARGE.--56 years (1895-1908, 1928-71), 2,592 cfs (11.58 inches per year).

EXTREMES.--Current year: Maximum discharge, 61,300 cfs June 1 (gage height, 17.04 ft); minimum, 358 cfs Oct. 10 (gage height, 1.16 ft); minimum daily, 400 cfs Oct. 11.

Period of record: Maximum discharge, 230,000 cfs Oct. 16, 1942 (gage height, 32.4 ft, from floodmarks); minimum, about 59 cfs Oct. 4, 1930 (gage height, 0.39 ft); minimum daily, 194 cfs July 24, 1930.

Flood of 1870 reached practically same stage as flood of Mar. 18, 1936, 26.36 ft (discharge, 151,000 cfs).

REMARKS.--Records good. Regulation by hydroelectric plants, particularly that of Potomac Light and Power Co., 0.5 mile upstream from station.

REVISIONS (WATER YEARS).--WSP 951: 1936(M). WSP 1432: Drainage area at former site, 1895-99, 1901-2, 1905, 1907-8, 1932(M), 1935(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	505	1,160	1,650	2,200	2,320	5,470	2,120	1,580	50,700	1,530	1,340	1,230
2	520	4,160	1,580	1,950	1,940	4,880	2,050	1,580	19,600	1,710	1,570	867
3	468	4,490	1,440	2,070	1,910	4,610	2,050	1,540	11,900	1,800	1,560	744
4	459	4,360	1,400	2,130	1,790	4,700	2,020	1,530	8,750	1,750	1,690	796
5	454	5,070	1,420	3,150	1,950	5,460	1,950	1,480	7,010	1,690	2,100	780
6	457	5,550	1,370	6,820	2,390	5,980	1,880	1,470	6,380	1,390	3,740	722
7	438	5,060	1,210	11,400	2,750	5,740	2,160	1,420	5,170	1,250	3,030	719
8	476	4,020	1,230	8,720	3,860	6,140	3,840	1,480	4,680	1,220	1,950	742
9	467	3,180	1,200	6,400	3,120	6,240	4,570	1,660	4,610	1,470	1,600	722
10	422	2,640	1,190	5,090	2,940	5,690	5,300	1,670	4,170	1,400	1,310	792
11	400	2,620	1,120	4,270	2,680	5,040	6,050	1,570	3,390	1,250	1,280	898
12	466	4,550	1,180	3,710	2,400	4,500	6,110	1,480	2,930	1,370	1,320	1,760
13	464	14,100	1,160	3,390	3,200	4,100	5,350	1,510	3,050	1,570	1,500	2,310
14	408	10,300	1,180	3,280	19,700	3,720	4,570	2,080	3,250	1,760	1,290	3,030
15	474	6,970	1,200	3,970	27,100	3,420	3,990	2,660	3,390	1,390	1,220	2,950
16	479	5,590	1,290	4,920	11,900	3,210	3,510	3,130	3,530	1,200	1,200	2,010
17	516	4,790	1,600	5,060	8,010	3,020	3,150	4,260	3,540	1,130	944	1,950
18	463	4,030	2,300	4,140	6,330	2,920	2,970	4,400	3,720	1,090	932	1,610
19	417	3,380	2,280	3,600	5,580	2,810	2,740	4,300	3,370	1,060	1,010	1,420
20	445	3,010	2,240	3,080	5,440	2,850	2,520	3,710	2,920	1,110	961	1,400
21	540	3,210	2,080	2,990	5,990	2,860	2,350	4,900	2,630	1,120	866	2,050
22	574	3,140	2,270	2,680	7,040	2,910	2,190	5,610	2,590	1,050	967	2,280
23	644	3,140	5,560	2,580	8,790	2,770	2,080	7,780	2,450	1,070	957	2,140
24	675	2,850	8,140	2,880	11,800	2,590	2,020	5,600	2,380	964	888	1,900
25	905	2,600	7,050	2,980	10,300	2,430	1,970	4,400	2,510	979	852	1,710
26	775	2,370	5,620	2,550	8,020	2,350	1,930	3,880	2,400	1,030	823	1,490
27	683	2,190	4,500	2,970	6,790	2,260	1,890	3,120	2,080	995	903	1,410
28	604	1,900	3,770	2,780	6,050	2,240	1,720	2,650	1,850	978	942	1,400
29	520	1,890	3,170	2,460	------	2,250	1,680	2,360	1,730	1,080	945	1,360
30	529	1,900	2,760	2,080	------	2,190	1,630	4,060	1,690	1,320	975	1,260
31	747	------	2,430	2,810	------	2,170	------	35,600	------	1,600	1,130	------
TOTAL	16,393	124,220	76,590	119,510	181,990	117,520	88,360	124,470	178,370	40,326	41,795	44,452
MEAN	529	4,141	2,471	3,855	6,500	3,791	2,945	4,015	5,946	1,301	1,348	1,482
MAX	905	14,100	8,140	11,400	27,100	6,240	6,110	35,600	50,700	1,800	3,740	3,030
MIN	400	1,160	1,120	1,950	1,790	2,170	1,630	1,420	1,690	964	823	719
CFSM	.17	1.36	.81	1.27	2.14	1.25	.97	1.32	1.96	.43	.44	.49
IN.	.20	1.52	.94	1.46	2.23	1.44	1.08	1.52	2.18	.49	.51	.54

CAL YR 1970 TOTAL 887,541 MEAN 2,432 MAX 15,200 MIN 400 CFSM .80 IN 10.86
WTR YR 1971 TOTAL 1,153,996 MEAN 3,162 MAX 50,700 MIN 400 CFSM 1.04 IN 14.12

PEAK DISCHARGE (BASE, 15,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-13	1315	8.94	16,900	6- 1	0445	17.04	61,300
2-15	0315	12.86	35,200				

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD.

LOCATION.--Lat 39°16'25", long 77°32'35", Frederick County, on left bank at downstream side of bridge on U.S. Highway 15 at Point of Rocks, 0.3 mile downstream from Catoctin Creek (Virginia), 6 miles upstream from Monocacy River, and at mile 159.5.

DRAINAGE AREA.--9,651 sq mi.

PERIOD OF RECORD.--February 1895 to current year.

GAGE.--Water-stage recorder. Datum of gage is 200.54 ft above mean sea level, adjustment of 1912. Prior to Sept. 2, 1902, nonrecording gage on downstream side of bridge at datum about 0.45 ft higher. Sept. 2, 1902, to Oct. 28, 1929, nonrecording gage at same site and present datum.

AVERAGE DISCHARGE.--76 years, 9,079 cfs (12.77 inches per year).

EXTREMES.--Current year: Maximum discharge, 86,400 cfs Feb. 24 (gage height, 15.92 ft); minimum, 1,200 cfs Oct. 11 (gage height, 0.70 ft).

Period of record: Maximum discharge, 480,000 cfs Mar. 19, 1936 (gage height, 41.03 ft), from rating curve extended above 300,000 cfs on basis of adjustment of figure of peak flow at station near Washington for inflow and storage, and slope-area measurement of peak flow; minimum, 530 cfs Sept. 11, 12, 1966 (gage height, 0.27 ft).

Flood of June 2, 1889, reached a stage of 40.2 ft, from floodmarks (discharge, about 460,000 cfs, from rating curve extended as explained above).

REMARKS.--Records good. Low flow affected slightly since 1913 by Stony River Reservoir and since December 1950 by Savage River Reservoir. Low flow affected extensively at times by run-of-the-river hydroelectric plants. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 192: 1895-1905. WSP 1432: 1899, 1901-2, 1904-5, 1912, 1914(M), 1915, 1917(M), 1918, 1919(M), 1920, 1921-23(M), 1924, 1925-28(M), 1930(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,030	2,950	6,190	10,000	9,000	35,500	9,590	5,240	73,800	3,980	2,850	3,760
2	1,970	11,000	5,960	8,600	8,800	30,700	9,280	5,250	44,700	3,990	4,720	3,080
3	1,880	13,400	5,640	8,200	7,500	26,400	8,850	5,140	27,400	4,030	5,670	2,220
4	1,660	17,000	5,310	8,600	6,800	24,300	8,470	5,270	21,400	4,130	7,890	2,160
5	1,590	19,400	5,160	15,000	7,200	22,500	8,150	5,170	16,900	4,080	11,600	2,080
6	1,520	17,400	5,130	36,800	8,570	21,700	7,860	5,110	14,700	3,520	14,600	1,910
7	1,430	15,100	4,920	46,800	10,100	21,500	8,720	7,320	13,100	3,270	13,700	1,820
8	1,390	13,100	4,840	36,400	15,700	24,800	10,400	14,400	12,900	2,960	9,060	1,810
9	1,350	11,200	4,670	26,900	14,200	29,600	12,900	18,200	12,600	2,930	6,500	2,010
10	1,300	9,480	4,500	21,300	11,200	25,900	14,100	19,900	11,400	3,130	5,190	1,990
11	1,220	8,800	4,230	17,300	10,000	21,700	15,400	16,100	9,830	2,800	4,410	2,370
12	1,270	12,700	4,350	15,100	9,650	19,100	16,500	12,800	8,460	2,740	4,640	6,540
13	1,410	29,700	4,570	14,000	13,000	17,200	15,300	11,500	7,960	2,930	4,260	5,630
14	1,660	46,000	6,250	15,100	35,200	16,400	13,500	13,700	8,040	3,400	3,630	8,560
15	1,750	32,100	7,790	15,700	73,000	17,100	12,100	21,500	8,570	3,050	3,240	11,900
16	1,700	26,500	7,630	18,700	44,300	18,000	11,000	20,400	11,100	2,840	3,130	11,100
17	1,620	22,500	9,160	22,900	29,900	18,300	10,100	19,500	11,100	2,610	2,990	11,400
18	1,600	17,400	14,800	18,400	23,900	18,000	9,480	18,600	10,300	2,560	2,920	9,190
19	1,510	14,100	16,000	15,500	22,800	16,400	8,920	17,000	9,140	2,510	2,930	7,370
20	1,390	12,200	14,000	13,500	30,100	15,200	8,420	14,800	8,150	2,420	3,050	6,720
21	1,480	12,000	12,000	12,700	40,200	14,900	8,010	16,800	7,210	2,360	2,750	7,740
22	1,810	12,400	12,600	11,000	59,700	14,900	7,420	23,300	6,740	2,260	2,510	8,810
23	1,650	11,200	22,500	10,800	72,400	13,900	6,990	22,500	6,290	2,210	2,480	8,950
24	1,700	10,100	58,900	10,900	83,200	13,300	6,750	16,300	6,070	2,160	2,330	8,150
25	2,670	9,170	54,600	11,400	60,700	12,200	6,490	13,100	6,240	2,240	2,240	6,810
26	3,060	8,230	38,700	12,200	42,400	11,600	6,250	11,700	5,840	2,230	2,170	5,920
27	2,570	7,540	28,700	11,800	35,500	10,800	6,100	10,100	5,550	2,250	2,490	5,300
28	2,380	6,830	21,200	10,800	35,300	10,300	5,740	8,680	4,930	2,140	2,650	4,880
29	2,460	6,510	16,300	10,000	------	9,930	5,600	7,810	4,530	2,280	2,440	4,700
30	2,500	6,370	13,900	9,000	------	9,540	5,380	9,200	4,210	2,800	2,370	4,790
31	2,540	------	11,800	9,200	------	9,520	------	33,400	------	3,090	2,420	------
TOTAL	56,070	442,380	432,300	504,600	820,320	571,190	283,770	429,790	399,160	89,900	143,830	169,670
MEAN	1,809	14,750	13,950	16,280	29,300	18,430	9,459	13,860	13,310	2,900	4,640	5,656
MAX	3,060	46,000	58,900	46,800	83,200	35,500	16,500	33,400	73,800	4,130	14,600	11,900
MIN	1,220	2,950	4,230	8,200	6,800	9,520	5,380	5,110	4,210	2,140	2,170	1,810
CFSM	.19	1.53	1.45	1.69	3.04	1.91	.98	1.44	1.38	.30	.48	.59
IN.	.22	1.71	1.67	1.94	3.16	2.20	1.09	1.66	1.54	.35	.55	.65

CAL YR 1970 TOTAL 3,885,630 MEAN 10,650 MAX 80,700 MIN 1,220 CFSM 1.10 IN 14.98
WTR YR 1971 TOTAL 4,342,980 MEAN 11,900 MAX 83,200 MIN 1,220 CFSM 1.23 IN 16.74

PEAK DISCHARGE (BASE, 35,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-14	0830	10.80	49,300	2-24	0600	15.92	86,400
12-24	1800	13.44	67,100	3- 1	0430	8.63	36,300
1- 7	1100	10.60	48,100	6- 1	1400	15.40	82,200
2-15	0700	15.28	81,200				

01643700 GOOSE CREEK NEAR MIDDLEBURG, VA.

LOCATION.--Lat 38°59'11", long 77°47'49", Loudoun County, on right bank 250 ft upstream from bridge on State Highway 611, 2.0 miles downstream from Panther Skin Creek, and 3.4 miles northwest of Middleburg.

DRAINAGE AREA.--123 sq mi.

PERIOD OF RECORD.--October 1965 to September 1967, July 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 329.80 ft above mean sea level. October 1965 to September 1967 at site 300 ft downstream at datum 0.73 ft lower.

EXTREMES.--Current year: Maximum discharge, 6,170 cfs Feb. 13 (gage height, 11.92 ft), from rating curve extended as explained below; minimum, 3.1 cfs Oct. 7, 8; minimum gage height, 1.90 ft Aug. 26.

Period of record: Maximum discharge, 6,920 cfs Aug. 25, 1967 (gage height, 14.44 ft, site and datum then in use); from rating curve extended above 2,900 cfs on basis of slope-area measurement at gage height 14.44 ft; minimum, 0.10 cfs Sept. 1-4, 8-12, 1966.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	70	84	100	120	263	88	68	624	55	42	12
2	6.8	45	80	135	105	246	91	73	450	65	30	14
3	6.4	210	74	191	105	277	111	79	373	48	30	14
4	5.1	148	80	198	111	363	88	67	291	42	137	11
5	4.2	189	68	301	124	303	81	60	246	39	91	9.0
6	3.7	102	67	294	212	333	109	62	219	37	43	7.5
7	3.7	73	60	241	241	323	548	62	296	37	29	7.0
8	3.7	59	59	210	800	291	413	117	279	33	22	6.7
9	3.9	51	60	189	478	263	358	123	187	29	16	6.0
10	3.7	48	61	171	217	243	325	83	157	32	15	4.6
11	4.6	205	59	157	196	229	275	73	137	31	18	50
12	5.5	656	76	155	187	207	239	68	135	34	79	194
13	6.8	1,260	85	159	1,310	194	207	215	196	28	27	108
14	9.5	413	68	171	1,230	180	182	236	180	24	18	62
15	16	470	60	198	518	173	161	173	311	21	15	30
16	41	313	68	162	393	159	150	378	272	19	13	21
17	17	248	408	155	320	141	141	313	217	25	12	34
18	9.2	207	241	140	296	131	166	246	180	19	12	32
19	7.6	177	203	135	294	157	127	196	152	29	13	24
20	7.2	217	171	130	325	189	117	224	133	38	13	31
21	13	253	171	135	350	141	113	393	117	25	10	26
22	108	182	632	139	508	131	109	222	106	19	8.5	21
23	38	164	455	164	664	137	98	180	104	16	9.0	18
24	24	137	390	150	493	119	95	157	133	18	9.0	18
25	17	124	301	133	415	109	90	144	86	33	7.0	16
26	15	119	260	150	358	115	84	133	75	28	6.3	17
27	13	113	219	148	355	115	78	108	65	24	42	28
28	12	106	189	145	294	111	83	98	60	18	95	22
29	12	97	161	135	------	106	79	133	57	18	28	18
30	22	93	140	130	------	100	73	884	61	55	17	16
31	164	------	115	150	------	91	------	1,360	------	84	14	------
TOTAL	609.4	6,549	5,165	5,171	11,019	5,940	4,879	6,728	5,899	1,023	920.8	877.8
MEAN	19.7	218	167	167	394	192	163	217	197	33.0	29.7	29.3
MAX	164	1,260	632	301	1,310	363	548	1,360	624	84	137	194
MIN	3.7	45	59	100	105	91	73	60	57	16	6.3	4.6
CFSM	.16	1.77	1.36	1.36	3.20	1.56	1.33	1.76	1.60	.27	.24	.24
IN.	.18	1.98	1.56	1.56	3.33	1.80	1.48	2.03	1.78	.31	.28	.27

CAL YR 1970 TOTAL 47,017.3 MEAN 129 MAX 1,260 MIN 3.7 CFSM 1.05 IN 14.22
WTR YR 1971 TOTAL 54,781.0 MEAN 150 MAX 1,360 MIN 3.7 CFSM 1.22 IN 16.57

PEAK DISCHARGE (BASE, 1,350 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-13	0700	7.66	2,360	5-30	1400	7.13	1,520
2- 8	2130	7.29	1,990	5-31	0800	8.28	2,310
2-13	2300	11.92	6,170				

01644000 GOOSE CREEK NEAR LEESBURG, VA.

LOCATION.--Lat 39°01'10", long 77°34'40", Loudoun County, on left bank 400 ft upstream from bridge on State Highway 621 at Evergreen Mills, 1.4 miles downstream from Little River, 6.7 miles south of Leesburg, and 10.9 miles upstream from mouth.

DRAINAGE AREA.--332 sq mi.

PERIOD OF RECORD.--July 1909 to April 1911, September 1911 to December 1912, January 1930 to current year.

GAGE.--Water-stage recorder. Datum of gage is 248.93 ft above mean sea level. July 12, 1909, to Dec. 31, 1912, nonrecording gage at site 1,000 ft downstream at different datum. Jan. 21, 1930, to Nov. 28, 1938, nonrecording gage at site 400 ft downstream at datum 4.20 ft lower than present datum.

AVERAGE DISCHARGE.--43 years (1909-10, 1911-12, 1930-71), 291 cfs (11.90 inches per year).

EXTREMES.--Current year: Maximum discharge, 8,380 cfs Nov. 13 (gage height, 12.26 ft); minimum, 8.2 cfs Oct. 7, 8 (gage height, 1.18 ft).

Period of record: Maximum discharge, 45,000 cfs Aug. 26, 1937 (gage height, 26.86 ft, from floodmarks, site and datum then in use), Oct. 16, 1942 (gage height, 22.9 ft, present datum), from rating curve extended above 9,400 cfs on basis of slope-area measurement at gage height 22.9 ft; minimum daily, 0.40 cfs Sept. 27-30, 1941.

Flood in May or June 1889 reached a stage of about 29 ft (discharge, about 65,000 cfs), site and datum in use 1930-38, from information by local residents.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 851: 1935-37. WSP 951: 1933(M), 1937. WSP 1302: 1934-35(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	176	194	212	218	612	214	182	1,640	137	121	441
2	11	87	185	392	222	576	219	186	1,120	149	85	142
3	9.6	137	173	386	223	652	274	223	902	124	99	83
4	9.1	380	176	434	227	1,060	229	188	661	102	485	63
5	9.6	285	167	910	263	802	206	168	535	89	296	50
6	10	194	155	966	535	930	278	168	514	83	174	43
7	9.6	132	143	696	743	858	1,570	174	790	81	115	38
8	8.6	106	129	612	1,930	725	1,260	252	838	75	88	34
9	9.1	87	135	549	1,810	634	895	359	470	67	71	31
10	10	77	140	464	625	584	769	229	370	62	63	29
11	10	188	137	428	562	560	646	191	315	66	67	436
12	11	1,080	155	392	457	501	568	177	276	64	209	1,900
13	13	5,690	212	416	2,300	466	505	513	330	64	133	535
14	14	1,130	167	428	3,760	438	447	722	386	52	79	392
15	18	1,240	146	542	1,170	417	385	445	476	45	65	194
16	66	830	173	458	878	397	364	1,010	482	39	55	129
17	45	605	1,080	375	709	344	338	935	392	38	50	375
18	22	494	668	320	647	315	391	643	315	42	48	216
19	14	416	514	310	673	346	321	506	264	42	48	140
20	11	440	428	300	736	513	289	445	240	52	47	129
21	17	726	380	294	820	365	278	966	220	57	41	118
22	129	452	1,400	311	1,060	319	268	557	200	44	35	94
23	113	386	1,290	389	1,770	326	245	432	185	36	33	83
24	49	315	1,030	464	1,190	296	237	362	224	31	32	79
25	33	272	782	375	970	268	222	336	182	35	29	69
26	27	260	675	498	834	270	212	386	161	44	24	77
27	26	252	563	480	849	278	199	291	146	49	45	106
28	25	240	482	325	717	269	201	258	143	46	212	91
29	25	220	434	280	------	259	213	273	140	36	112	77
30	26	212	470	397	------	246	191	1,910	143	164	58	67
31	124	------	410	431	------	225	------	3,740	------	179	43	------
TOTAL	918.6	17,109	13,193	13,834	26,938	14,851	12,434	17,227	13,060	2,194	3,062	6,261
MEAN	29.6	570	426	446	962	479	414	556	435	70.8	98.8	209
MAX	129	5,690	1,400	966	3,760	1,060	1,570	3,740	1,640	179	485	1,900
MIN	8.6	77	129	212	218	225	191	168	140	31	24	29
CFSM	.09	1.72	1.28	1.34	2.90	1.44	1.25	1.67	1.31	.21	.30	.63
IN.	.10	1.92	1.48	1.55	3.02	1.66	1.39	1.93	1.46	.25	.34	.70

CAL YR 1970 TOTAL 117,082.0 MEAN 321 MAX 5,690 MIN 8.6 CFSM .97 IN 13.12
WTR YR 1971 TOTAL 141,081.6 MEAN 387 MAX 5,690 MIN 8.6 CFSM 1.17 IN 15.81

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-13	0930	12.26	8,380	5-31	1300	7.92	4,870
2-14	0330	10.36	6,760				

01644290 STAVE RUN AT RESTON, VA.

LOCATION.--Lat 38°56'57", long 77°22'18", Fairfax County, on left bank 0.28 mile upstream from mouth, and 1.9 miles southwest of Reston.

DRAINAGE AREA.--0.05 sq mi (33 acres).

PERIOD OF RECORD.--December 1966 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 380.87 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 50 cfs July 29 (gage height, 2.07 ft), from rating curve extended above 7.0 cfs; no flow for many days.
Period of record: Maximum discharge, 50 cfs July 29, 1971 (gage height, 2.07 ft), from rating curve extended above 7.0 cfs; no flow at times each year.

REMARKS.--Records good. Water-quality records for the current year are included in this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	.01	.01	.02	.01	0	.70	0	.71	.02
2	0	0	0	.01	0	.02	.01	0	.04	0	.04	0
3	0	.36	0	.01	0	.80	.01	.01	.03	0	.53	0
4	0	1.7	0	.02	0	.19	.01	0	.02	0	.38	0
5	0	.19	0	.21	.01	.05	.01	0	.02	0	.02	0
6	0	.01	0	.13	.05	.04	.08	.01	.15	0	0	0
7	0	0	0	.04	.83	.03	.56	.01	.22	0	0	0
8	0	0	0	.02	.75	.02	.03	.01	.01	0	0	0
9	0	0	0	.01	.10	.02	.01	.01	.01	0	0	0
10	0	.05	0	.01	.02	.02	.01	.01	0	0	0	0
11	0	.45	0	.01	.02	.02	.01	.01	0	0	0	.50
12	0	.30	.01	.02	.05	.01	.01	0	0	0	0	.33
13	0	.40	.01	.02	1.9	.01	.01	1.3	0	0	0	0
14	0	.33	0	.05	.06	.01	.01	.03	.35	0	0	0
15	.14	.45	0	.05	.04	.01	.01	.02	.02	0	0	0
16	.15	.02	.27	.02	.03	.01	.01	.97	.01	0	0	0
17	0	.01	.04	.01	.03	.01	.01	.05	0	0	0	.01
18	0	.01	.01	.01	.05	.01	.01	.03	0	0	0	0
19	0	.01	.01	0	.07	.05	.01	.02	0	.02	0	0
20	0	.02	.01	0	.13	.02	.01	.33	0	0	0	0
21	.26	.01	.05	0	.05	.01	.01	.14	0	0	0	0
22	.02	.01	.62	.01	.85	.01	.01	.03	0	0	0	0
23	0	.01	.04	.04	.13	.01	.01	.02	0	0	0	0
24	0	0	.10	.02	.04	.01	.01	.02	0	0	0	0
25	0	0	.01	.04	.02	.01	.01	.02	0	0	0	0
26	0	.01	.01	.22	.02	.01	.01	.01	0	.03	0	0
27	0	.01	.01	.01	.06	.01	.01	.01	0	0	.70	0
28	0	0	.01	0	.02	.01	.01	.01	0	0	0	0
29	0	0	.01	0	------	.01	.01	.02	0	.60	0	0
30	0	0	.01	.01	------	.01	0	.10	0	.21	.02	0
31	.02	------	.01	.01	------	.01	------	.35	------	0	0	------
TOTAL	.59	4.36	1.24	1.02	5.35	1.47	.93	3.55	1.58	.86	2.40	.83
MEAN	.019	.15	.040	.033	.19	.047	.031	.11	.053	.028	.077	.028
MAX	.26	1.7	.62	.22	1.9	.80	.56	1.3	.70	.60	.71	.50
MIN	0	0	0	0	0	.01	0	0	0	0	0	0
CFSM	.38	3.00	.80	.66	3.80	.94	.62	2.20	1.06	.56	1.54	.56
IN.	.44	3.24	.92	.76	3.98	1.09	.69	2.64	1.18	.64	1.79	.62

CAL YR 1970 TOTAL 20.59 MEAN .056 MAX 1.7 MIN 0 CFSM 1.12 IN 15.32
WTR YR 1971 TOTAL 24.18 MEAN .066 MAX 1.9 MIN 0 CFSM 1.32 IN 17.99

PEAK DISCHARGE (BASE, 20 CFS, REVISED)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
7-29	1800	2.07	50	8- 1	2130	1.90	35
8- 1	1400	1.78	26	8- 3	2300	1.78	26

01644295 SMILAX BRANCH AT RESTON, VA.

LOCATION.--Lat 38°57'10", long 77°22'04", Fairfax County, on right bank 100 ft upstream from Dulles Airport Road, 0.4 mile upstream from mouth, 1.6 miles southwest of Reston, and 4.3 miles east of Dulles International Airport.

DRAINAGE AREA.--0.32 sq mi.

PERIOD OF RECORD.--March 1967 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 356.59 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 70 cfs May 13 (gage height, 4.38 ft), from rating curve extended as explained below; no flow Oct. 1-14, 17-20, 23-29, July 13-18, 21-25, 28, Aug. 23-26.

Period of record: Maximum discharge, 70 cfs May 13, 1971 (gage height, 4.38 ft), from rating curve extended above 25 cfs on basis of slope-area measurement of peak flow; no flow for many days each year.

REVISIONS.--The maximum discharge and supplemental peak discharge for the water year 1968 has been revised to 13 cfs June 12, 1968 (gage height, 3.80 ft), and 12 cfs May 28, 1968 (gage height, 3.78 ft), superseding figures published in WRD Va. 1968.

REMARKS.--Records good. Water-quality records for the current year are included in this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.01	.08	.44	.18	.43	.22	.24	.75	.04	.13	.12
2	0	.01	.08	.16	.10	.38	.34	.22	.53	.03	.21	.04
3	0	.50	.09	.16	.09	2.2	.43	.24	.53	.03	.12	.03
4	0	2.6	.05	.56	.10	2.5	.31	.20	.34	.02	.71	.02
5	0	1.3	.07	2.2	.30	1.1	.29	.22	.29	.02	.12	.02
6	0	.07	.07	.92	.38	1.0	1.1	.20	.38	.02	.04	.02
7	0	.05	.06	.49	3.1	.76	4.1	.22	.91	.02	.02	.02
8	0	.03	.06	.35	3.7	.52	1.2	.49	.53	.01	.02	.02
9	0	.03	.07	.30	1.4	.43	.70	.37	.24	.01	.02	.02
10	0	.14	.07	.29	.56	.43	.49	.29	.16	.01	.03	.01
11	0	.83	.08	.25	.35	.43	.40	.24	.15	.01	.02	.78
12	0	.43	.25	.25	.40	.40	.37	.22	.15	.01	.06	2.5
13	0	.65	.14	.25	7.4	.38	.37	10	.15	0	.02	1.8
14	0	.28	.09	.43	1.4	.40	.34	1.1	.56	0	.01	.37
15	.14	2.2	.09	.46	.72	.38	.29	.43	.53	0	.01	.10
16	.15	.28	.70	.35	.52	.38	.27	5.5	.29	0	.02	.07
17	0	.07	.92	.28	.46	.33	.29	1.0	.18	0	.01	.14
18	0	.02	.35	.23	.40	.28	.31	.43	.13	0	.01	.07
19	0	.01	.28	.18	.40	.87	.29	.29	.12	.01	.01	.06
20	0	.15	.20	.16	.52	.75	.29	.88	.10	.04	.01	.07
21	.26	.05	.35	.16	.43	.37	.27	1.6	.08	0	.01	.07
22	.09	.03	3.0	.18	3.2	.34	.22	.56	.08	0	.01	.05
23	0	.03	.92	.56	2.4	.56	.22	.34	.08	0	0	.05
24	0	.03	.92	.40	.88	.37	.22	.27	.06	0	0	.04
25	0	.03	.46	.56	.60	.31	.22	.24	.05	0	0	.04
26	0	.05	.46	.88	.52	.29	.22	.20	.05	.01	0	.09
27	0	.06	.28	.52	.78	.34	.22	.16	.04	.02	1.9	.05
28	0	.06	.20	.30	.56	.31	.27	.16	.04	0	.10	.03
29	0	.06	.18	.18	------	.31	.24	.31	.04	.19	.02	.03
30	.02	.08	.18	.28	------	.24	.24	3.1	.05	.12	.12	.03
31	.05	------	.20	.28	------	.24	------	5.7	------	.03	.02	------
TOTAL	.71	10.14	10.98	13.00	31.83	18.03	14.74	35.42	7.59	.65	3.78	6.76
MEAN	.023	.34	.35	.42	1.14	.58	.49	1.14	.25	.021	.12	.23
MAX	.26	2.6	3.0	2.2	7.4	2.5	4.1	10	.91	.19	1.9	2.5
MIN	0	.01	.06	.16	.09	.24	.22	.16	.04	0	0	.01
CFSM	.07	1.06	1.09	1.31	3.56	1.81	1.53	3.56	.78	.07	.38	.72
IN.	.08	1.18	1.28	1.51	3.70	2.10	1.71	4.12	.88	.08	.44	.79

CAL YR 1970 TOTAL 109.90 MEAN .30 MAX 8.2 MIN 0 CFSM .94 IN 12.76
WTR YR 1971 TOTAL 153.63 MEAN .42 MAX 10 MIN 0 CFSM 1.31 IN 17.86

PEAK DISCHARGE (BASE, 20 CFS, REVISED)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	1800	4.15	43	9-12	1400	4.04	34
5-13	0630	4.38	70				

01646000 DIFFICULT RUN NEAR GREAT FALLS, VA.

LOCATION.--Lat 38°58'33", long 77°14'46", Fairfax County, on right bank 300 ft downstream from Rocky Run, 0.7 mile upstream from mouth, and 1.5 miles southeast of Great Falls.

DRAINAGE AREA.--57.9 sq mi.

PERIOD OF RECORD.--October 1934 to current year. Monthly discharge only October to December 1934, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 151.30 ft above mean sea level.

AVERAGE DISCHARGE.--37 years, 53.8 cfs (12.62 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,850 cfs Feb. 14 (gage height, 9.07 ft), from rating curve extended as explained below; minimum, 6.2 cfs Oct. 8 (gage height, 2.52 ft).

Period of record: Maximum discharge, 6,610 cfs Aug. 25, 1967 (gage height, 13.18 ft), from rating curve extended above 1,600 cfs on basis of contracted-opening measurement of peak flow; minimum, 0.05 cfs Sept. 9, 10, 1966 (gage height, 1.65 ft).

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 951: 1936(M), 1937-38, 1939-40(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	22	32	33	46	63	47	42	128	32	139	31
2	9.7	16	31	34	42	59	75	42	91	32	234	31
3	9.1	40	31	35	39	150	131	43	96	30	57	27
4	7.8	85	33	61	40	218	80	40	97	27	154	25
5	7.5	531	29	306	72	118	52	39	124	27	62	23
6	6.7	57	29	158	99	105	109	41	74	[illegible]	41	23
7	6.5	36	28	76	235	90	534	42	100	36	32	22
8	6.2	29	27	52	713	75	166	69	105	26	28	22
9	6.5	25	27	44	384	62	92	65	66	32	26	22
10	7.0	24	28	42	93	58	72	46	57	26	25	21
11	10	74	27	42	72	55	64	42	52	24	58	64
12	8.5	119	42	44	67	52	59	40	50	23	100	330
13	8.0	185	42	46	504	51	59	561	54	22	42	114
14	8.0	62	32	60	787	50	55	198	55	21	27	41
15	16	334	28	80	134	50	51	79	136	20	24	26
16	58	78	40	54	105	56	52	596	76	19	23	22
17	14	48	227	45	92	81	51	161	59	20	23	64
18	10	40	55	41	80	74	55	90	52	20	22	29
19	9.1	36	41	37	87	100	49	72	46	25	23	24
20	8.8	40	34	35	97	130	48	90	45	29	22	22
21	32	47	37	32	93	69	48	318	42	21	21	22
22	55	36	330	37	262	61	46	104	40	19	20	21
23	18	32	116	94	467	86	44	76	39	18	22	20
24	14	30	93	75	125	63	44	66	39	18	19	20
25	13	32	61	78	94	56	42	61	36	28	18	18
26	13	34	52	90	81	57	42	56	34	23	18	24
27	12	34	43	72	92	57	42	52	34	34	278	24
28	12	34	39	52	72	53	44	51	33	20	160	20
29	12	33	36	47	------	53	44	69	33	125	38	19
30	15	34	33	49	------	51	42	366	34	246	30	18
31	32	------	32	50	------	48	------	647	------	55	27	------
TOTAL	455.1	2,227	1,735	2,001	5,074	2,353	2,339	4,264	1,927	1,129	1,833	1,189
MEAN	14.7	74.2	56.0	64.5	181	75.9	78.0	138	64.2	36.4	59.1	39.6
MAX	58	531	330	306	787	218	534	647	136	246	278	330
MIN	6.2	16	27	32	39	48	42	39	33	18	18	18
CFSM	.25	1.28	.97	1.11	3.13	1.31	1.35	2.38	1.11	.63	1.02	.68
IN.	.29	1.43	1.11	1.29	3.26	1.51	1.50	2.74	1.24	.73	1.18	.76

CAL YR 1970 TOTAL 20,042.2 MEAN 54.9 MAX 695 MIN 6.2 CFSM .95 IN 12.88
WTR YR 1971 TOTAL 26,526.1 MEAN 72.7 MAX 787 MIN 6.2 CFSM 1.26 IN 17.04

PEAK DISCHARGE (BASE, 800 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11- 5	0730	7.27	980	2-23	0030	6.80	817
2- 8	0230	7.91	1,240	5-13	1330	7.30	1,000
2- 9	0100	7.07	906	5-16	1500	7.23	980
2-14	0100	9.07	1,850	5-31	1030	7.28	1,000

01646500 POTOMAC RIVER NEAR WASHINGTON, D. C.

LOCATION.--Lat 38°56'58", long 77°07'40", Montgomery County, Maryland, on left bank just above Little Falls Dam, 1 mile upstream from District of Columbia boundary line, 1.2 miles upstream from Chain Bridge, 1.8 miles east of Langley, Fairfax County, Virginia, and at mile 117.4.

DRAINAGE AREA.--11,560 sq mi.

PERIOD OF RECORD.--March 1930 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 37.95 ft above sea level. Prior to June 7, 1930, nonrecording gage, and June 7, 1930, to Jan. 22, 1965, water-stage recorder, at site 1 mile upstream on right bank at same datum.

AVERAGE DISCHARGE.--41 years, 10,730 cfs (12.61 inches per year), adjusted for diversions.

EXTREMES.--Current year: Maximum discharge, 91,200 cfs Feb. 24 (gage height, 9.15 ft); minimum daily, 1,170 cfs Oct. 13 (does not include diversion of 452 cfs for municipal use).

Period of record: Maximum discharge, 484,000 cfs Mar. 19, 1936 (gage height, 28.1 ft, site then in use); minimum daily observed at gaging station, 121 cfs Sept. 9, 1966 (does not include diversion of 489 cfs for municipal use); minimum daily (adjusted), 601 cfs Sept. 10, 1966 (includes diversion of 449 cfs for municipal use).

Flood of June 2, 1889, was of approximately the same magnitude as that of March 19, 1936.

REMARKS.--Records good. Diversions at Great Falls through aqueducts, and since June 1959, from gage pool at Little Falls Dam, for municipal supply of Washington, D. C.; since October 1958, at Rockville Filtration Plant, for municipal supply of city of Rockville; since April 1961, at Potomac Filtration Plant, for water supply of Washington Suburban Sanitary District; since October 1961, at Fairfax Water Treatment Plant for water supply of city of Fairfax (from Goose Creek); and since April 1964, at Violets Lock, to Chesapeake and Ohio Canal. Low flow affected slightly by Stony River Reservoir and since December 1950 by Savage River Reservoir. Low flow affected extensively at times by run-of-the-river hydroelectric plants. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS.--WSP 726: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,330	2,990	6,680	12,300	10,000	40,800	10,200	6,020	70,200	4,400	3,930	2,730
2	2,040	4,380	6,680	10,800	7,580	38,300	10,200	5,860	61,800	4,790	5,150	4,460
3	1,870	12,700	6,300	9,610	9,280	32,600	10,100	5,840	35,600	4,330	6,790	3,450
4	1,810	15,500	5,500	9,500	8,590	32,200	9,680	5,810	26,100	4,030	15,900	2,540
5	1,690	24,700	5,300	14,100	7,910	27,800	9,180	5,820	21,600	4,000	13,800	2,320
6	1,520	21,300	5,010	36,500	9,500	27,100	8,950	5,780	17,500	3,940	16,100	2,230
7	1,440	17,000	5,020	51,200	12,900	26,400	14,200	5,890	15,800	3,570	15,600	2,060
8	1,390	14,300	5,090	44,100	22,600	28,800	14,000	11,100	17,400	3,220	11,800	1,920
9	1,290	12,300	4,970	32,400	31,700	32,900	14,400	17,800	14,300	2,880	8,100	1,850
10	1,260	10,400	4,780	25,700	19,100	30,000	15,000	21,400	13,100	2,950	5,990	1,960
11	1,240	9,270	4,700	20,800	13,500	25,100	16,000	19,400	11,500	3,040	4,970	2,580
12	1,210	10,300	4,590	17,700	12,100	22,000	17,400	15,100	9,830	2,830	4,940	32,900
13	1,170	26,900	4,720	15,900	16,000	19,700	17,500	16,300	8,770	2,690	4,940	13,900
14	1,210	48,200	5,430	15,500	46,700	18,500	15,100	15,300	8,520	2,810	4,280	8,910
15	1,620	44,300	6,950	17,000	74,000	18,400	13,700	20,300	9,330	3,120	3,730	10,700
16	1,980	31,700	8,020	17,600	58,300	19,300	12,500	26,700	10,900	2,910	3,510	12,200
17	1,660	27,800	11,100	23,600	37,200	19,400	11,500	24,600	12,300	2,790	3,550	12,000
18	1,730	21,400	16,900	21,700	28,900	19,400	10,800	22,200	11,400	2,620	3,190	12,100
19	1,790	16,900	19,000	17,600	26,400	18,600	10,200	19,600	10,200	2,630	3,110	8,980
20	1,680	13,900	16,900	14,400	31,900	18,600	9,570	17,200	9,140	2,680	3,110	7,460
21	1,630	13,900	14,300	13,300	41,300	17,900	9,000	18,600	8,180	2,440	3,120	6,760
22	2,010	15,500	16,000	12,600	60,400	17,000	8,330	22,800	7,260	2,370	2,920	9,050
23	2,350	12,800	22,200	11,600	80,200	16,000	7,970	25,300	6,790	2,160	2,690	9,520
24	2,590	11,300	51,700	12,200	89,500	14,900	7,520	20,300	6,260	2,130	2,510	8,760
25	2,240	10,400	64,800	12,200	74,400	13,800	7,110	15,300	6,060	2,270	2,770	7,550
26	2,730	9,350	47,000	12,900	52,200	13,000	6,800	13,600	5,930	2,260	2,490	6,540
27	3,210	8,570	34,900	13,400	42,300	12,200	6,790	11,700	5,660	2,350	3,960	5,930
28	2,800	7,880	26,500	12,200	41,100	11,500	6,650	10,000	5,330	2,200	4,720	5,360
29	2,600	7,150	20,000	11,400	------	11,100	6,340	8,920	4,890	2,450	3,970	5,000
30	2,570	6,870	16,300	11,100	------	10,500	6,110	11,100	4,560	3,600	3,590	4,880
31	2,930	------	13,900	11,200	------	10,200	------	30,000	------	4,780	3,080	------
TOTAL	59,590	489,960	481,240	562,110	965,560	663,700	322,800	475,640	456,210	95,240	178,310	216,600
MEAN	1,922	16,330	15,520	18,130	34,480	21,410	10,760	15,340	15,210	3,072	5,752	7,220
MAX	3,210	48,200	64,800	51,200	89,500	40,800	17,500	30,000	70,200	4,790	16,100	32,900
MIN	1,170	2,990	4,590	9,500	7,580	10,200	6,110	5,780	4,560	2,130	2,490	1,850
(*)	432	405	412	410	413	415	416	424	457	519	463	450
MEAN‡	2,354	16,740	15,930	18,540	34,890	21,820	11,180	15,760	15,670	3,591	6,215	7,670
CFSM‡	.20	1.45	1.38	1.60	3.02	1.89	.97	1.36	1.36	.31	.54	.66
IN.‡	.23	1.62	1.59	1.84	3.14	2.18	1.08	1.57	1.52	.36	.62	.74

CAL YR 1970 TOTAL 4,430,630 MEAN 12,140 MAX 85,700 MIN 1,170 MEAN‡ 12,570 CFSM‡ 1.09 IN.‡ 14.80
WTR YR 1971 TOTAL 4,966,960 MEAN 13,610 MAX 89,500 MIN 1,170 MEAN‡ 14,040 CFSM‡ 1.21 IN.‡ 16.42

PEAK DISCHARGE (BASE, 45,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-14	1700	7.16	52,400	2-24	0745	9.15	91,200
12-25	0015	8.20	71,200	6- 1	2100	8.77	82,700
1- 7	1315	7.18	52,800	9-12	0800	6.94	48,700
2-15	1500	8.73	81,900				

* DIVERSION, IN CFS, TO CHESAPEAKE AND OHIO CANAL AND FOR MUNICIPAL SUPPLY OF WASHINGTON, D.C., WASHINGTON SUBURBAN SANITARY DISTRICT, CITY OF ROCKVILLE, AND CITY OF FAIRFAX (FROM GOOSE CREEK); RECORDS FURNISHED BY CORPS OF ENGINEERS, WASHINGTON SUBURBAN SANITARY COMMISSION, CITY OF ROCKVILLE, AND CITY OF FAIRFAX.

‡ ADJUSTED FOR DIVERSION.

01653000 CAMERON RUN AT ALEXANDRIA, VA.

LOCATION.--Lat 38°48'23", long 77°06'35", Alexandria City, on left bank 25 ft downstream from bridge on Southern Railway at Alexandria, 800 ft downstream from confluence of Holmes Run and Backlick Run, 0.5 mile east of the U.S. Army Quartermaster Depot, and 3.4 miles upstream from mouth.

DRAINAGE AREA.--33.7 sq mi.

PERIOD OF RECORD.--June 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 36.51 ft above mean sea level. Prior to Sept. 20, 1965, at same site at datum 2.34 ft higher.

AVERAGE DISCHARGE.--16 years, 32.8 cfs (13.22 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,320 cfs Aug. 27 (gage height, 9.32 ft), from rating curve extended as explained below; minimum daily, 3.2 cfs Oct. 19.

Period of record: Maximum discharge, 9,300 cfs Sept. 14, 1966 (gage height, 14.14 ft), from rating curve extended above 1,500 cfs on basis of culvert computations of peak flow for main channel and bypass channels; minimum, 1.1 cfs Aug. 15, 1957, Sept. 22-25, 1964.

REMARKS.--Records good. Some regulation by Lake Barcroft, formerly Alexandria Reservoir, on Holmes Run 3.6 miles upstream (usable capacity, 2,380 acre-ft). Water-quality records have been collected at this location and are published in reports of the Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	13	7.0	24	20	24	15	17	44	66	14	11
2	4.4	11	7.0	18	16	24	53	16	52	27	12	11
3	4.6	44	7.0	20	19	248	53	15	86	16	13	11
4	3.9	535	8.8	89	19	220	32	13	75	14	73	10
5	3.6	332	7.0	263	54	36	12	12	92	13	61	9.9
6	3.6	23	6.3	93	30	34	122	13	30	45	25	9.9
7	3.6	14	6.0	60	408	33	286	20	44	18	19	9.9
8	3.9	12	6.0	50	397	31	46	62	31	12	14	8.8
9	3.9	10	6.3	46	149	30	38	37	17	43	11	9.5
10	12	13	6.3	40	44	22	34	16	12	40	8.8	9.2
11	10	159	8.4	16	36	15	25	14	11	16	25	85
12	9.6	111	29	17	25	15	25	14	12	13	14	218
13	8.4	102	10	17	821	15	23	663	11	11	7.7	113
14	8.4	42	8.0	47	308	15	31	49	16	9.5	7.0	93
15	16	385	8.0	25	46	16	28	28	38	8.8	7.0	62
16	18	32	219	20	36	17	23	509	24	10	6.5	32
17	5.6	20	170	19	33	18	19	73	16	9.9	6.5	109
18	3.9	17	45	20	31	16	19	29	13	24	6.3	62
19	3.2	15	17	19	29	133	14	13	12	18	11	33
20	3.6	32	12	15	30	69	14	37	12	9.5	6.3	19
21	104	14	44	16	24	30	15	154	15	7.7	5.7	17
22	31	12	505	16	308	27	17	27	9.2	8.0	6.0	13
23	8.4	10	54	37	306	51	14	19	6.5	8.4	5.5	9.9
24	7.0	8.8	29	20	39	179	15	16	6.3	26	5.0	9.5
25	6.3	8.0	20	28	29	88	15	45	6.0	15	4.7	9.2
26	7.0	8.0	18	23	24	48	15	46	5.7	8.8	4.7	16
27	4.6	8.0	15	26	54	30	39	12	5.5	8.8	101	11
28	4.4	7.7	14	27	26	23	27	8.0	15	8.0	74	9.2
29	5.6	7.3	14	24	------	20	25	39	5.2	188	27	8.4
30	20	7.3	13	25	------	17	17	249	5.0	332	18	8.0
31	32	------	13	17	------	15	------	368	------	150	12	------
TOTAL	365.1	2,013.1	1,333.1	1,177	3,361	1,559	1,111	2,633.0	727.4	1,184.4	611.7	1,037.4
MEAN	11.8	67.1	43.0	38.0	120	50.3	37.0	84.9	24.2	38.2	19.7	34.6
MAX	104	535	505	263	821	248	286	663	92	332	101	218
MIN	3.2	7.3	6.0	15	16	15	12	8.0	5.0	7.7	4.7	8.0
CFSM	.35	1.99	1.28	1.13	3.56	1.49	1.10	2.52	.72	1.13	.58	1.03
IN.	.40	2.22	1.47	1.30	3.71	1.72	1.23	2.91	.80	1.31	.68	1.15

CAL YR 1970 TOTAL 14,629.9 MEAN 40.1 MAX 1,080 MIN 2.4 CFSM 1.19 IN 16.15
WTR YR 1971 TOTAL 17,113.2 MEAN 46.9 MAX 821 MIN 3.2 CFSM 1.39 IN 18.89

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 7	1945	6.39	2,240	7-30	1900	6.18	2,080
2-13	2000	7.98	3,390	8-27	1630	9.32	4,320
5-13	0615	6.67	2,450				

01654000 ACCOTINK CREEK NEAR ANNANDALE, VA.

LOCATION.--Lat 38°48'46", long 77°13'43", Fairfax County, on left bank 800 ft upstream from bridge on State Highway 620, 0.2 mile upstream from Long Branch, and 2.3 miles southwest of Annandale.

DRAINAGE AREA.--23.5 sq mi.

PERIOD OF RECORD.--March 1947 to current year (fragmentary prior to October 1947).

GAGE.--Water-stage recorder. Datum of gage is 190.91 ft above mean sea level (levels by Stone and Webster Engineering Corp). Prior to May 12, 1949, nonrecording gage at site 800 ft downstream at same datum. May 12, 1949, to June 4, 1970, water-stage recorder at site 800 ft downstream at same datum.

AVERAGE DISCHARGE.--24 years, 26.5 cfs (15.31 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,380 cfs July 30 (gage height, 9.20 ft), from rating curve extended as explained below; minimum, 2.4 cfs Oct. 4, 5 (gage height, 1.25 ft).

Period of record: Maximum discharge, 7,870 cfs Aug. 24, 1967, July 22, 1969, from rating curve extended above 1,200 cfs on basis of three contracted-opening measurements at gage heights 8.41, 9.08, and 9.89 ft, and one computation of flow over dam at gage height 11.84 ft; maximum gage height, 11.85 ft July 22, 1969; minimum discharge, 0.10 cfs Sept. 25, 26, 1954.

REMARKS.--Records good. Slight diurnal fluctuation during low flow caused by sewage disposal plant above station near Fairfax. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1502: 1952. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	9.4	10	17	14	26	14	12	27	9.7	90	8.9
2	4.4	7.8	10	17	14	24	38	12	24	9.4	149	8.9
3	4.2	24	10	16	13	128	35	14	25	7.8	15	8.1
4	4.0	216	13	63	13	172	17	12	22	7.1	54	7.6
5	4.2	337	11	218	32	39	16	12	27	7.3	38	7.1
6	4.4	16	9.7	43	28	33	112	13	18	9.4	13	7.3
7	4.6	12	9.7	22	216	30	336	15	35	11	11	7.1
8	4.4	11	9.7	17	373	28	36	43	23	6.8	9.7	6.8
9	4.4	10	10	16	59	25	26	18	15	30	8.9	6.8
10	6.6	11	11	16	20	25	22	13	14	12	8.6	6.4
11	7.3	104	10	15	16	25	20	13	13	6.8	45	83
12	5.9	42	22	16	16	23	19	13	13	6.6	23	212
13	5.9	86	13	16	491	23	18	442	14	5.7	10	24
14	5.9	21	11	34	223	23	17	38	15	5.5	8.4	14
15	11	192	10	25	24	23	16	21	26	5.3	7.8	11
16	36	18	94	18	19	23	16	351	15	4.8	7.6	9.1
17	7.1	14	106	16	18	22	17	35	13	4.8	7.6	122
18	6.1	12	19	15	17	20	19	22	12	5.9	7.8	11
19	6.1	12	16	15	17	94	15	19	11	6.8	7.8	8.1
20	5.9	14	15	13	19	38	15	25	9.4	7.3	7.3	7.8
21	40	14	30	13	18	20	15	124	9.7	4.4	6.6	8.4
22	24	11	218	14	187	18	15	26	9.4	4.8	6.6	7.1
23	9.1	11	34	42	163	29	15	18	9.1	5.0	6.6	6.8
24	7.6	13	28	20	39	18	15	17	8.9	9.0	5.5	6.6
25	7.3	10	21	28	32	16	14	16	7.1	11	5.3	5.9
26	7.8	10	18	34	28	17	13	15	7.3	13	6.1	11
27	7.3	10	17	20	40	16	12	14	6.8	14	548	7.8
28	7.1	10	16	18	28	15	14	14	7.8	5.3	28	6.6
29	6.8	10	15	14	------	16	14	30	6.4	198	12	6.1
30	12	10	15	16	------	15	12	169	7.1	368	9.4	6.4
31	22	------	16	16	------	15	------	284	------	34	8.4	------
TOTAL	293.8	1,278.2	848.1	863	2,177	1,039	963	1,870	451.0	836.5	1,172.0	649.7
MEAN	9.48	42.6	27.4	27.8	77.8	33.5	32.1	60.3	15.0	27.0	37.8	21.7
MAX	40	337	218	218	491	172	336	442	35	368	548	212
MIN	4.0	7.8	9.7	13	13	15	12	12	6.4	4.4	5.3	5.9
CFSM	.40	1.81	1.17	1.18	3.31	1.43	1.37	2.57	.64	1.15	1.61	.92
IN.	.47	2.02	1.34	1.37	3.45	1.64	1.52	2.96	.71	1.32	1.86	1.03

CAL YR 1970 TOTAL 10,210.1 MEAN 28.0 MAX 652 MIN 4.0 CFSM 1.19 IN 16.16
WTR YR 1971 TOTAL 12,441.3 MEAN 34.1 MAX 548 MIN 4.0 CFSM 1.45 IN 19.69

PEAK DISCHARGE (BASE, 1,400 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	2400	8.92	2,180	7-30	0030	9.20	2,380
5-13	1130	8.03	1,480	8-27	1700	8.21	1,620

01655500 CEDAR RUN NEAR WARRENTON, VA.

LOCATION (revised).--Lat 38°44'25", long 77°47'16", Fauquier County, on right bank at downstream side of bridge on State Highway 672, 1.9 miles north of Warrenton, and 14.5 miles upstream from Licking Run.

DRAINAGE AREA.--12.3 sq mi.

PERIOD OF RECORD.--July 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 419.40 ft above mean sea level.

AVERAGE DISCHARGE.--21 years, 11.4 cfs (12.59 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,000 cfs Feb. 13 (gage height, 7.62 ft), from rating curve extended as explained below; minimum, 0.60 cfs Aug. 9.

Period of record: Maximum discharge, 3,100 cfs June 8, 1955 (gage height, 9.59 ft), from rating curve extended above 600 cfs on basis of areal study of flood of 1942; no flow part of each day Aug. 11-14, 1967, probably caused by dam 400 ft above gage.

Flood in October 1942 reached a stage of about 13 ft, from information by local residents.

REMARKS.--Records good. Some regulation by Warrenton municipal water-supply reservoir 400 ft above station.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1382: 1951-53. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	7.9	6.2	12	9.5	20	9.0	7.1	52	23	2.1	2.0
2	1.4	5.8	6.0	12	8.1	18	10	7.6	36	18	3.2	2.6
3	1.3	27	5.8	9.5	7.6	34	12	9.2	28	6.0	8.4	2.6
4	1.2	22	7.9	15	8.4	52	9.8	6.7	21	3.9	52	2.4
5	1.2	30	3.0	49	9.5	39	8.7	6.7	17	3.3	5.8	2.2
6	9.2	10	8.2	47	15	38	16	6.4	15	4.5	2.2	2.1
7	1.1	7.6	2.4	34	64	35	94	6.7	25	6.0	1.6	1.8
8	1.1	6.4	3.5	25	94	29	69	14	28	3.5	1.1	1.8
9	1.2	5.3	5.3	22	52	24	47	12	15	3.2	.70	1.8
10	1.2	5.8	5.5	19	5.8	21	35	10	10	4.9	.80	2.0
11	1.3	70	5.5	17	3.5	19	28	6.9	9.0	3.2	2.2	2.1
12	1.3	80	7.4	16	2.8	17	24	8.7	12	2.7	4.7	8.7
13	1.4	61	7.4	17	216	15	20	62	18	2.2	2.0	6.4
14	1.6	37	6.4	20	103	14	19	40	19	2.1	1.3	4.1
15	2.0	61	5.3	24	55	14	15	27	47	1.6	1.1	2.4
16	2.2	32	9.8	20	39	12	14	95	30	1.7	.90	2.2
17	2.1	22	33	17	30	10	13	62	23	1.6	1.2	2.6
18	2.0	18	18	16	24	9.2	13	38	19	1.5	1.3	2.4
19	2.1	15	15	12	21	17	11	27	14	2.4	1.4	2.6
20	2.1	18	12	10	24	20	10	28	11	2.6	1.2	3.3
21	2.2	16	15	9.8	22	13	12	35	9.5	2.0	1.5	2.8
22	2.4	12	63	10	49	13	9.2	20	8.4	1.6	1.5	2.4
23	2.1	10	44	20	77	14	10	15	9.2	1.4	1.5	2.4
24	2.0	8.1	36	20	49	11	9.2	14	8.7	2.0	1.2	2.7
25	2.0	7.9	26	18	38	10	7.9	12	6.0	3.2	1.1	2.1
26	2.0	7.9	20	22	30	12	8.1	11	5.3	2.7	1.2	3.3
27	2.1	7.9	17	19	32	11	7.6	10	4.7	2.1	8.6	3.3
28	2.2	7.6	14	14	24	11	8.7	8.4	4.3	1.6	8.9	2.8
29	2.2	6.9	12	12	------	10	9.2	12	4.1	1.6	3.9	2.6
30	4.7	6.9	10	14	------	10	7.4	58	4.3	2.2	2.7	2.4
31	16	------	11	13	------	9.2	------	96	------	2.2	2.0	------
TOTAL	76.3	633.0	441.6	585.3	1,113.2	581.4	566.8	772.4	513.5	120.5	129.30	84.9
MEAN	2.53	21.1	14.2	18.9	39.8	18.8	18.9	24.9	17.1	3.89	4.17	2.83
MAX	16	80	63	49	216	52	94	96	52	23	52	8.7
MIN	1.1	5.3	2.4	9.5	2.8	9.2	7.4	6.4	4.1	1.4	.70	1.8
CFSM	.21	1.72	1.15	1.54	3.24	1.53	1.54	2.02	1.39	.32	.34	.23
IN.	.24	1.91	1.34	1.77	3.37	1.76	1.71	2.34	1.55	.36	.39	.26

CAL YR 1970 TOTAL 4,550.40 MEAN 12.5 MAX 111 MIN .90 CFSM 1.02 IN 13.76
WTR YR 1971 TOTAL 5,620.20 MEAN 15.4 MAX 216 MIN .70 CFSM 1.25 IN 17.00

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 7	2030	5.66	274	2-13	1900	7.62	1,000

01656000 CEDAR RUN NEAR CATLETT, VA.

LOCATION.--Lat 38°38'12", long 77°37'31", Fauquier County, on right bank 100 ft downstream from bridge on State Highway 806, 0.9 mile downstream from Licking Run, and 1.4 miles southeast of Catlett.

DRAINAGE AREA.--93.4 sq mi.

PERIOD OF RECORD.--July 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 199.15 ft above mean sea level.

AVERAGE DISCHARGE.--21 years, 77.6 cfs (11.28 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,020 cfs Feb. 14 (gage height, 11.20 ft); minimum, 0.31 cfs Oct. 13 (gage height, 2.06 ft).

Period of record: Maximum discharge, 7,300 cfs June 8, 1955 (gage height, 17.25 ft); no flow on many days in 1954, 1957, 1959, 1963, 1964, and 1966.

Flood of Oct. 15, 1942, reached a stage of about 22 ft, from information by local residents.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	36	28	120	50	110	36	22	276	20	4.9	5.5
2	.76	20	28	175	50	98	39	22	154	93	12	5.2
3	.72	70	26	155	52	418	66	24	134	32	12	5.5
4	.68	123	27	220	55	833	49	23	100	19	155	4.1
5	.48	452	28	519	65	264	40	20	80	14	48	3.0
6	.52	88	20	409	100	226	194	20	65	17	18	2.7
7	.48	53	24	207	380	171	1,070	20	304	34	8.8	2.4
8	.52	41	17	130	1,180	130	351	37	310	18	4.9	1.8
9	.52	33	18	93	567	109	182	42	90	16	4.1	1.8
10	.48	31	22	83	154	94	122	28	62	15	2.4	2.4
11	.48	448	20	73	116	90	93	23	49	14	2.2	2.4
12	.44	846	28	80	90	80	79	19	57	10	21	9.2
13	.44	446	48	90	1,040	74	70	507	90	8.4	9.6	39
14	.64	218	34	164	1,570	70	61	314	200	6.9	4.1	15
15	.80	890	27	231	295	70	52	101	608	5.8	2.4	8.0
16	12	231	120	130	193	66	48	1,080	207	3.5	2.0	4.9
17	6.9	124	470	93	146	57	44	364	128	2.9	1.4	4.1
18	2.2	88	134	96	128	50	52	175	88	2.5	1.3	6.9
19	1.3	74	88	134	132	94	43	114	66	2.5	1.3	4.9
20	.80	76	70	171	154	167	38	100	56	4.1	1.5	6.1
21	1.8	122	100	114	138	79	37	724	46	4.1	1.3	8.0
22	34	67	900	53	484	62	36	167	42	2.5	.87	6.1
23	10	57	348	144	874	79	30	96	43	1.8	.87	5.2
24	4.6	46	204	124	298	62	30	74	94	1.4	.72	3.8
25	2.5	40	124	112	202	51	28	65	40	4.1	.72	5.8
26	1.5	38	98	182	160	52	26	54	32	5.2	.52	4.4
27	1.7	38	74	109	197	57	25	44	26	2.9	27	9.6
28	1.7	36	67	95	142	53	25	41	22	2.2	108	8.4
29	1.3	34	64	80	------	49	28	96	20	1.7	23	7.3
30	1.8	32	68	70	------	44	24	993	22	1.8	10	6.1
31	63	------	74	60	------	39	------	1,090	------	5.2	6.1	------
TOTAL	155.82	4,898	3,398	4,516	9,012	3,898	3,018	6,499	3,511	371.5	496.00	199.6
MEAN	5.03	163	110	146	322	126	101	210	117	12.0	16.0	6.65
MAX	63	890	900	519	1,570	833	1,070	1,090	608	93	155	39
MIN	.44	20	17	53	50	39	24	19	20	1.4	.52	1.8
CFSM	.05	1.75	1.18	1.56	3.45	1.35	1.08	2.25	1.25	.13	.17	.07
IN.	.06	1.95	1.35	1.80	3.59	1.55	1.20	2.59	1.40	.15	.20	.08

CAL YR 1970 TOTAL 30,175.86 MEAN 82.7 MAX 1,370 MIN .44 CFSM .89 IN 12.02
WTR YR 1971 TOTAL 39,972.92 MEAN 110 MAX 1,570 MIN .44 CFSM 1.18 IN 15.92

PEAK DISCHARGE (BASE, 1,800 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 8	0230	8.75	1,810	2-14	0230	11.20	3,020

01656500 BROAD RUN AT BUCKLAND, VA.

LOCATION.--Lat 38°46'50", long 77°40'22", Prince William County, on right bank at downstream side of bridge on U.S. Highway 29 at Buckland, 1.1 miles upstream from South Run.

DRAINAGE AREA.--50.5 sq mi.

PERIOD OF RECORD.--July 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 284.58 ft above mean sea level.

AVERAGE DISCHARGE.--21 years, 45.3 cfs (12.18 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,390 cfs Feb. 13 (gage height, 5.85 ft); minimum, 2.3 cfs Oct. 8, 9 (gage height, 1.01 ft).

Period of record: Maximum discharge, 11,600 cfs July 20, 1956 (gage height, 13.08 ft), from rating curve extended above 3,200 cfs on basis of slope-area measurement of peak flow; minimum, 0.20 cfs Oct. 10, 1954.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	25	27	38	30	81	30	23	190	19	11	12
2	3.1	15	27	42	28	78	34	27	143	19	12	16
3	2.9	66	25	45	29	116	53	26	113	16	24	11
4	2.7	148	26	81	31	185	37	27	94	14	314	9.2
5	2.6	144	23	190	43	132	39	26	86	13	46	8.0
6	2.5	49	23	163	72	138	78	21	68	14	24	7.4
7	2.4	32	21	116	210	118	419	23	90	20	15	7.2
8	2.4	24	19	89	415	99	255	53	101	14	12	6.6
9	2.4	20	21	78	234	86	156	64	63	12	10	6.3
10	2.5	19	22	69	160	78	120	45	44	14	8.8	6.0
11	2.6	220	22	63	80	74	104	37	38	13	11	6.6
12	2.8	333	28	64	75	68	100	42	38	13	44	26
13	2.8	468	34	64	556	63	75	249	58	11	17	26
14	2.8	145	26	83	550	60	76	135	53	10	12	15
15	4.2	264	25	97	155	57	62	73	86	8.4	10	11
16	7.0	135	39	75	122	54	62	331	89	8.4	9.2	9.2
17	4.5	94	168	64	101	47	47	181	62	9.6	8.8	15
18	3.5	79	85	50	90	43	70	119	45	8.4	9.2	16
19	3.4	68	66	41	86	63	47	89	38	10	10	12
20	3.3	73	53	37	93	86	46	88	33	13	10	15
21	14	94	62	38	94	60	43	138	28	10	8.4	13
22	38	62	282	43	204	50	40	86	26	8.4	7.4	12
23	12	53	163	65	292	52	31	68	25	7.7	8.4	11
24	7.0	41	144	88	158	45	33	56	30	8.0	7.4	11
25	5.4	37	103	75	127	40	33	49	25	10	6.6	9.2
26	4.8	36	88	96	110	42	26	42	23	8.8	5.8	10
27	5.0	36	74	88	114	43	32	38	21	7.7	44	13
28	5.1	34	62	75	94	40	26	36	20	7.2	37	12
29	5.1	32	53	60	------	39	36	56	19	6.9	15	10
30	9.0	30	45	50	------	35	24	271	21	9.2	11	9.2
31	58	------	36	42	------	30	------	472	------	12	8.8	------
TOTAL	226.9	2,876	1,892	2,269	4,354	2,202	2,234	2,991	1,770	355.7	777.8	351.9
MEAN	7.32	95.9	61.0	73.2	156	71.0	74.5	96.5	59.0	11.5	25.1	11.7
MAX	59	468	282	190	556	185	419	472	190	20	314	26
MIN	2.4	15	19	37	28	30	24	21	19	6.9	5.8	6.0
CFSM	.15	1.90	1.21	1.45	3.09	1.41	1.48	1.91	1.17	.23	.50	.23
IN.	.17	2.12	1.39	1.67	3.21	1.62	1.65	2.20	1.30	.26	.57	.26

CAL YR 1970 TOTAL 18,178.3 MEAN 49.8 MAX 598 MIN 2.4 CFSM .99 IN 13.39
WTR YR 1971 TOTAL 22,300.3 MEAN 61.1 MAX 556 MIN 2.4 CFSM 1.21 IN 16.43

PEAK DISCHARGE (BASE, 800 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-11	2130	4.78	860	2-13	2000	5.85	1,390
2- 7	2330	4.84	882	8- 4	0200	4.93	928

01656700 OCCOQUAN RIVER NEAR MANASSAS, VA.

(Formerly published as Occoquan Creek near Manassas)

LOCATION.--Lat 38°42'19", long 77°26'46", Prince William County, on right bank 200 ft downstream from bridge on State Highway 234 at Lake Jackson, 3.3 miles southeast of Manassas, and 3.7 miles upstream from Bull Run.

DRAINAGE AREA.--343 sq mi.

PERIOD OF RECORD.--April 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 119.53 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 16,900 cfs Feb. 14 (gage height, 14.64 ft), from rating curve extended above 5,200 cfs on basis of velocity-area study; minimum daily, 6.1 cfs Oct. 7-9.

Period of record: Maximum discharge, 16,900 cfs Feb. 14, 1971 (gage height, 14.64 ft), from rating curve extended above 5,200 cfs on basis of velocity-area study; minimum, 2.3 cfs Oct. 1, 2, 1968; minimum gage height, 0.83 ft July 21, 1969.

Flood of Aug. 25, 1967 reached a stage of about 16 ft.

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	123	64	165	165	448	163	101	2,570	51	34	54
2	7.4	65	59	210	139	388	157	96	805	71	95	53
3	7.0	52	57	223	115	943	216	96	665	101	58	31
4	6.7	286	55	268	110	4,800	282	106	480	59	408	26
5	6.4	2,200	57	1,600	142	1,320	216	87	417	40	402	21
6	6.2	366	53	2,620	302	565	296	79	325	33	178	17
7	6.1	170	43	1,190	633	695	6,620	82	569	40	95	14
8	6.1	110	45	735	5,260	530	3,800	145	1,310	53	52	13
9	6.1	78	39	404	4,680	432	1,060	160	432	39	33	11
10	6.2	65	37	374	930	360	665	228	266	47	26	9.8
11	6.5	824	41	338	480	340	480	155	193	32	23	16
12	6.6	3,780	52	332	425	310	402	124	195	34	30	91
13	6.6	1,330	103	388	2,930	282	360	2,810	332	25	47	96
14	6.8	685	101	469	14,800	264	318	2,050	374	20	46	55
15	11	3,060	72	1,000	2,610	252	266	635	1,130	17	30	49
16	14	973	82	660	918	269	230	5,430	595	17	22	30
17	17	402	1,800	400	635	220	218	3,640	417	14	18	29
18	15	274	605	290	548	183	235	822	287	14	16	22
19	13	220	380	200	530	226	237	496	213	17	18	20
20	12	187	332	185	585	810	195	374	168	16	14	20
21	19	279	305	165	625	464	176	1,810	141	16	12	17
22	43	211	3,230	184	1,210	324	164	780	121	15	12	18
23	61	150	2,930	384	5,720	374	153	417	105	14	11	18
24	33	119	1,090	655	1,600	329	124	308	141	14	9.8	16
25	21	93	645	496	880	259	137	259	119	14	9.3	14
26	16	82	496	730	645	230	119	213	82	14	8.4	15
27	13	81	374	665	708	249	112	174	67	15	26	17
28	12	78	305	285	605	244	108	150	57	14	193	16
29	11	72	242	230	------	230	112	191	49	21	166	17
30	14	67	204	252	------	213	119	3,030	47	59	75	14
31	40	------	180	240	------	184	------	8,420	------	53	42	------
TOTAL	457.1	16,487	14,062	16,431	48,926	17,103	17,800	33,670	12,642	985	2,209.5	850.8
MEAN	14.7	550	454	530	1,747	552	593	1,086	421	31.8	71.3	28.4
MAX	61	3,780	3,230	2,620	14,800	4,800	6,620	8,420	2,570	101	408	96
MIN	6.1	52	37	165	110	184	108	78	47	14	8.4	9.8
CFSM	.04	1.60	1.32	1.55	5.09	1.61	1.73	3.17	1.23	.09	.21	.08
IN.	.05	1.79	1.53	1.78	5.31	1.85	1.93	3.65	1.37	.11	.24	.09

CAL YR 1970 TOTAL 126,676.8 MEAN 347 MAX 7,500 MIN 6.1 CFSM 1.01 IN 13.74
WTR YR 1971 TOTAL 181,623.4 MEAN 498 MAX 14,800 MIN 6.1 CFSM 1.45 IN 19.70

PEAK DISCHARGE (BASE, 5,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-22	1800	10.23	5,900	3- 4	0700	10.37	6,200
2- 9	0200	10.77	6,830	4- 7	1900	12.67	10,600
2-14	0530	14.64	16,900	5-16	1600	12.25	9,430
2-23	0630	10.87	6,990	5-31	1100	12.72	10,600

01656725 BULL RUN NEAR CATHARPIN, VA.

(Formerly published as Bull Run on State Highway 705, near Catharpin)

LOCATION.--Lat 38°53'21", long 77°34'14", Prince William County, on right bank 20 ft downstream from bridge on State Highway 705, 0.7 mile downstream from Chestnut Lick, 2.5 miles north of Catharpin, and 6.7 miles northeast of Gainesville.

DRAINAGE AREA.--25.8 sq mi.

PERIOD OF RECORD.--May 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 237.78 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 1,600 cfs Feb. 7 (gage height, 6.88 ft); no flow Oct. 1-10.
Period of record: Maximum discharge, 2,940 cfs Sept. 5, 1969 (gage height, 8.52 ft); no flow Sept. 8-30, Oct. 1-10, 1970.

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	6.1	10	20	17	38	13	9.4	66	2.3	1.9	12
2	0	2.6	9.8	27	13	35	17	9.8	42	3.2	3.4	8.2
3	0	16	8.8	22	12	105	36	12	33	2.0	12	3.4
4	0	70	9.4	44	14	158	20	9.4	22	1.6	52	2.0
5	0	380	8.5	184	25	98	16	8.5	26	1.2	8.5	1.4
6	0	130	7.8	120	51	87	90	8.8	34	1.2	3.4	1.1
7	0	80	6.6	68	241	65	570	9.1	128	1.6	1.8	.97
8	0	60	5.2	52	286	48	120	21	78	1.2	1.0	.89
9	0	54	4.4	42	100	38	76	22	33	.82	.66	.89
10	0	48	4.0	31	54	35	55	10	22	.82	.37	.89
11	.01	100	4.2	29	33	33	44	8.8	16	.74	.66	33
12	.01	230	5.0	31	42	28	39	8.2	15	.66	9.1	211
13	.01	600	13	35	395	26	35	158	19	.74	1.9	55
14	.01	90	10	61	167	25	29	72	16	.66	1.1	17
15	.04	350	9.0	68	75	24	25	34	36	.43	.66	8.5
16	.82	180	20	45	57	22	23	256	38	.34	.37	5.8
17	1.1	80	230	30	47	18	23	80	22	.23	.27	64
18	.51	40	56	22	45	16	30	44	14	.30	.27	16
19	.27	30	26	17	51	43	20	29	10	.51	.37	9.4
20	.20	24	21	13	65	58	19	28	9.1	1.4	.74	8.8
21	1.1	29	22	12	63	29	17	77	7.8	1.0	.43	5.8
22	8.2	25	300	18	239	24	15	31	6.9	.51	.43	4.7
23	2.3	20	200	59	188	31	14	21	5.8	.37	.34	3.8
24	1.1	16	120	52	87	22	13	17	5.2	.27	.23	3.8
25	.51	14	80	45	68	20	12	16	3.8	.51	.20	2.6
26	.37	13	60	116	55	20	11	13	2.8	1.0	.14	3.2
27	.43	12	43	60	71	20	10	10	2.4	1.1	41	5.5
28	.51	11	32	40	48	20	12	9.4	2.2	.97	17	4.0
29	.58	11	25	28	------	18	13	17	2.0	.58	3.2	3.2
30	1.1	10	27	25	------	16	10	220	3.0	.89	1.6	2.6
31	13	------	15	20	------	14	------	337	------	3.6	1.1	------
TOTAL	32.18	2,731.7	1,392.7	1,436	2,609	1,234	1,427	1,646.4	721.0	32.75	166.14	499.44
MEAN	1.04	91.1	44.9	46.3	93.2	39.8	47.6	53.1	24.0	1.06	5.36	16.6
MAX	13	600	300	184	395	158	570	337	128	3.6	52	211
MIN	0	2.6	4.0	12	12	14	10	8.2	2.0	.23	.14	.89
CFSM	.04	3.53	1.74	1.79	3.61	1.54	1.85	2.06	.93	.04	.21	.64
IN.	.05	3.94	2.01	2.07	3.76	1.78	2.06	2.37	1.04	.05	.24	.72

CAL YR 1970 TOTAL 11,306.81 MEAN 31.0 MAX 600 MIN 0 CFSM 1.20 IN 16.30
WTR YR 1971 TOTAL 13,928.31 MEAN 38.2 MAX 600 MIN 0 CFSM 1.48 IN 20.08

PEAK DISCHARGE (BASE, 820 CFS, REVISED)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 7	2100	6.88	1,600	4- 7	0730	5.84	978
2-13	2030	6.03	1,080	5-31	0530	5.95	1,020

01657000 BULL RUN NEAR MANASSAS, VA.

LOCATION.--Lat 38°47'50", long 77°27'28" (revised), Fairfax County, on left bank at upstream side of bridge on State Highway 616, 0.5 mile downstream from Cub Run, and 3.2 miles north of Manassas.

DRAINAGE AREA.--148 sq mi.

PERIOD OF RECORD.--October 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 138.76 ft above mean sea level. Prior to Dec. 14, 1967, at downstream side of former highway bridge at same datum.

AVERAGE DISCHARGE.--21 years, 135 cfs (12.39 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,490 cfs Feb. 14 (gage height, 13.88 ft); minimum, 2.2 cfs Oct. 4 (gage height, 1.74 ft).

Period of record: Maximum discharge, 13,000 cfs Aug. 25, 1967 (gage height, 19.27 ft), from rating curve extended above 10,600 cfs on basis of contracted-opening measurement of peak flow; minimum, 0.10 cfs many days in September, Oct. 14, 1954; minimum gage height, 0.96 ft July 15, 1966.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	52	42	93	70	200	51	36	500	18	68	227
2	3.3	33	39	118	48	167	62	36	341	20	64	149
3	3.9	63	37	93	42	525	249	38	198	17	33	45
4	3.1	516	36	152	44	2,170	146	36	153	16	269	28
5	3.1	2,260	36	1,280	69	510	90	33	164	14	102	20
6	3.1	404	34	1,130	211	458	258	32	158	14	46	16
7	3.1	258	31	481	593	341	4,620	33	428	16	27	16
8	3.3	202	30	300	2,700	252	1,230	97	580	13	19	15
9	3.6	171	30	200	1,590	191	347	146	142	14	14	13
10	3.9	158	31	150	359	160	234	69	80	13	12	12
11	4.2	749	31	126	220	146	173	47	57	11	18	20
12	4.5	1,890	40	128	169	125	144	39	45	11	52	241
13	4.7	3,520	76	175	1,940	107	123	2,120	51	9.6	36	320
14	5.0	512	60	276	3,570	96	104	612	80	9.2	21	78
15	9.4	2,060	44	518	432	93	84	195	168	9.4	13	37
16	22	465	128	280	300	87	77	2,650	144	12	7.8	24
17	9.5	221	1,310	170	234	69	74	713	80	13	7.2	63
18	7.0	164	340	130	211	58	96	243	51	12	8.0	64
19	6.6	130	207	95	225	123	75	144	38	12	7.6	31
20	5.7	116	148	68	300	406	63	115	33	15	6.3	23
21	46	200	152	57	371	184	57	718	29	14	6.2	20
22	46	125	1,760	53	1,040	121	53	276	26	13	5.8	17
23	34	99	1,040	268	2,700	206	48	132	24	13	5.8	14
24	12	75	584	438	552	144	46	88	23	18	5.5	13
25	8.2	58	333	302	356	92	44	74	22	24	5.5	12
26	7.0	53	243	668	281	82	42	59	20	15	5.3	14
27	6.1	52	171	588	366	87	38	48	19	12	69	14
28	5.7	49	132	330	281	79	38	43	18	10	214	16
29	5.7	47	107	178	------	77	44	54	19	14	50	15
30	7.0	45	92	150	------	67	39	1,290	18	36	24	14
31	40	------	69	100	------	56	------	2,940	------	42	16	------
TOTAL	329.8	14,747	7,413	9,095	19,274	7,519	8,749	13,146	3,709	480.2	1,238.0	1,591
MEAN	10.6	492	239	293	688	243	292	424	124	15.5	39.9	53.0
MAX	46	3,520	1,760	1,280	3,570	2,170	4,620	2,940	580	42	269	320
MIN	3.1	33	30	53	42	56	38	32	18	9.2	5.3	12
CFSM	.07	3.32	1.61	1.98	4.65	1.64	1.97	2.86	.84	.10	.27	.36
IN.	.08	3.71	1.86	2.29	4.84	1.89	2.20	3.30	.93	.12	.31	.40

CAL YR 1970 TOTAL 70,648.7 MEAN 194 MAX 3,930 MIN 3.1 CFSM 1.31 IN 17.76
WTR YR 1971 TOTAL 87,291.0 MEAN 239 MAX 4,620 MIN 3.1 CFSM 1.61 IN 21.94

PEAK DISCHARGE (BASE, 4,000 CFS, REVISED)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-13	1400	12.15	4,700	4- 7	1630	13.45	5,940
2-14	0500	13.88	6,490	5-16	1800	11.97	4,400
2-23	0530	11.95	4,400	5-31	1400	11.77	4,200

01658500 SOUTH FORK QUANTICO CREEK NEAR INDEPENDENT HILL, VA.

LOCATION.--Lat 38°35'14", long 77°25'44", Prince William County, on left bank at upstream side of bridge on State Highway 619, 3.4 miles south of Independent Hill, 5.6 miles west of Dumfries, and 6.5 miles upstream from mouth.

DRAINAGE AREA.--7.64 sq mi.

PERIOD OF RECORD.--May 1951 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 238.88 ft above mean sea level.

AVERAGE DISCHARGE.--20 years, 6.23 cfs (11.07 inches per year).

EXTREMES.--Current year: Maximum discharge, 462 cfs Feb. 13 (gage height, 7.07 ft); minimum, 0.17 cfs Oct. 1, 2; minimum gage height, 2.00 ft Oct. 1, 2, Aug. 10.

Period of record: Maximum discharge, 1,040 cfs Aug. 3, 1969 (gage height, 8.40 ft); no flow at times in 1954, 1957, 1962-66.

REMARKS.--Records fair except those below 2.0 cfs, which are poor. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	1.6	2.1	4.2	3.0	8.6	4.4	3.4	20	1.6	1.3	.70
2	.21	.95	2.1	4.2	2.7	6.6	6.3	3.4	11	3.3	2.3	1.2
3	.30	1.5	2.1	4.0	2.5	38	13	3.5	22	2.1	3.6	.62
4	.35	27	2.4	13	2.6	57	6.9	3.1	9.5	1.1	6.5	.46
5	.23	70	2.3	48	4.7	16	5.6	3.1	6.8	.85	2.4	.39
6	.26	5.4	2.1	22	8.0	12	28	3.2	4.9	1.7	1.3	.32
7	.23	2.9	1.9	11	30	10	132	3.2	10	2.2	.81	.39
8	.28	2.1	1.9	7.1	91	8.4	39	6.9	18	1.2	.47	.32
9	.26	1.7	2.0	5.6	42	7.4	16	5.2	5.7	1.0	.42	.22
10	.25	1.6	2.0	5.0	13	6.7	11	3.5	4.3	.88	.70	.22
11	.26	55	2.0	5.1	8.5	6.0	8.4	2.9	3.9	.74	1.0	.32
12	.27	46	3.5	5.4	8.1	5.5	7.4	2.6	6.4	.72	1.6	14
13	.28	10	4.4	5.7	115	5.4	6.9	81	13	.63	1.0	4.4
14	.34	5.6	3.1	9.9	91	4.8	6.0	20	11	.56	.85	1.7
15	.54	55	2.6	14	17	5.1	5.4	7.8	8.1	.66	.72	.90
16	.90	11	10	10	12	4.9	5.3	104	7.8	.60	.66	.70
17	.74	5.6	40	6.2	9.0	4.3	5.1	21	5.7	.62	.68	.62
18	.60	4.2	8.8	4.5	8.0	4.1	6.4	9.2	3.9	.70	.84	1.0
19	.52	3.6	5.6	3.7	7.4	19	5.3	5.9	3.3	.86	1.1	.52
20	.50	3.6	4.5	3.2	8.0	20	4.8	5.9	3.5	.80	.54	.54
21	1.2	4.1	5.9	3.5	7.4	8.5	4.8	47	2.9	.68	.32	.46
22	2.0	3.4	67	4.3	27	6.7	4.4	15	2.6	.58	2.0	.46
23	.88	3.0	21	11	60	9.2	4.1	9.6	2.5	.52	2.4	.54
24	.56	2.5	11	8.7	16	6.4	4.1	5.2	2.4	.70	2.3	.62
25	.51	2.3	7.1	7.6	11	5.3	3.7	4.6	2.1	1.0	2.1	.46
26	.47	2.3	6.0	10	9.4	5.6	3.6	4.3	2.1	.80	2.1	.70
27	.42	2.3	4.8	6.7	14	6.5	3.5	3.5	2.2	.66	8.0	.80
28	.39	2.3	4.3	4.4	9.8	6.8	4.0	3.4	2.0	.58	4.2	.62
29	.39	2.1	3.8	3.8	------	6.0	4.0	12	1.3	.56	1.1	.46
30	.71	2.2	3.5	4.7	------	5.0	3.4	176	1.5	.90	.62	.46
31	2.4	------	3.5	4.4	------	4.5	------	140	------	.76	.39	------
TOTAL	17.46	340.85	243.3	260.9	638.1	320.3	362.8	719.3	200.4	30.56	54.32	35.22
MEAN	.56	11.4	7.85	8.42	22.8	10.3	12.1	23.2	6.68	.99	1.75	1.17
MAX	2.4	70	67	48	115	57	132	176	22	3.3	8.0	14
MIN	.21	.95	1.9	3.2	2.5	4.1	3.4	2.6	1.3	.52	.32	.22
CFSM	.07	1.49	1.03	1.10	2.98	1.35	1.58	3.04	.87	.13	.23	.15
IN.	.09	1.66	1.18	1.27	3.11	1.56	1.77	3.50	.98	.15	.26	.17

CAL YR 1970 TOTAL 2,394.99 MEAN 6.56 MAX 125 MIN .03 CFSM .86 IN 11.66
WTR YR 1971 TOTAL 3,223.51 MEAN 8.83 MAX 176 MIN .21 CFSM 1.16 IN 15.70

PEAK DISCHARGE (BASE, 200 CFS, REVISED)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	2145	7.07	462	5-30	1200	6.22	300
5-16	1145	5.63	240				

01661800 BUSH MILL STREAM NEAR HEATHSVILLE, VA.

LOCATION.--Lat 37°52'36", long 76°29'42", Northumberland County, on right bank 12 ft upstream from bridge on State Highway 601, 2.2 miles northwest of Howland, 3.0 miles southwest of Heathsville, and 3.5 miles upstream from mouth.

DRAINAGE AREA.--6.82 sq mi.

PERIOD OF RECORD.--October 1963 to March 1969, October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 23.78 ft above mean sea level. Prior to Mar. 19, 1969, 52 ft downstream at datum 0.74 ft lower.

AVERAGE DISCHARGE.--7 years (1963-68, 1969-71), 6.28 cfs (12.50 inches per year).

EXTREMES.--Current year: Maximum discharge, 82 cfs May 16, Sept. 12; maximum gage height, 4.47 ft May 16; minimum discharge, 0.63 cfs Oct. 1, 2.

Period of record: Maximum discharge, 276 cfs June 20, 1968 (gage height, 4.51 ft, present datum), from rating curve extended above 109 cfs; no flow many days in August and September 1966.

Flood of Aug. 20, 1969, reached a stage of 6.13 ft, present datum, from floodmarks (discharge, about 450 cfs).

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.73	1.4	2.6	28	3.9	6.0	7.7	5.5	16	3.2	12	1.8
2	.73	1.4	2.2	9.4	2.4	6.3	7.8	5.3	11	4.4	2.5	1.7
3	.84	1.4	2.2	7.2	2.6	14	12	5.3	9.4	3.5	2.3	1.5
4	.84	1.8	1.8	8.2	5.1	19	8.4	4.9	7.7	2.9	2.4	1.4
5	.73	3.0	2.2	14	13	13	7.7	4.8	6.7	2.6	5.0	1.4
6	.98	1.5	2.0	8.4	9.4	11	36	4.6	5.9	2.7	2.0	1.3
7	1.1	1.4	1.7	6.3	15	10	28	5.2	8.7	3.3	1.5	1.2
8	1.1	1.4	1.7	5.5	24	9.5	13	11	15	2.5	1.2	1.2
9	1.9	1.4	1.8	5.5	12	9.2	11	7.7	6.9	3.3	1.2	1.1
10	1.7	5.3	1.8	6.0	5.8	8.9	9.8	5.5	6.0	3.7	1.2	1.2
11	1.5	36	1.8	6.7	4.3	8.9	8.9	4.6	5.0	13	1.2	1.5
12	1.5	13	4.1	6.7	3.9	8.6	8.4	4.0	5.7	10	1.5	24
13	1.5	6.7	4.1	5.8	22	8.6	8.3	10	11	4.1	1.1	9.7
14	1.2	5.3	2.2	8.7	27	8.4	7.7	9.4	8.6	3.2	1.0	3.6
15	1.4	11	1.8	9.6	9.6	10	7.3	5.5	6.4	2.6	.99	2.8
16	2.2	6.0	10	7.0	7.7	11	7.4	42	11	2.5	1.0	2.3
17	1.5	4.3	20	5.5	6.3	8.2	7.1	13	7.0	2.4	1.1	2.1
18	1.7	4.1	7.5	4.6	6.0	7.4	7.7	9.0	5.2	2.4	2.1	2.0
19	1.7	3.9	5.8	3.9	5.3	8.9	7.0	7.3	4.4	2.3	2.1	2.0
20	1.5	6.0	4.6	3.1	5.3	9.8	6.9	6.3	4.1	2.4	1.4	1.9
21	2.8	6.7	8.9	3.3	4.6	7.7	6.7	8.4	14	2.3	1.0	2.0
22	6.4	4.1	13	4.6	9.8	7.4	6.3	7.4	17	2.2	.89	1.9
23	2.0	3.9	7.9	5.8	17	9.2	6.3	5.6	6.9	2.0	.91	1.9
24	1.8	3.0	5.8	5.3	7.5	7.4	6.3	5.0	5.6	2.0	.71	1.8
25	1.7	2.8	4.6	7.7	6.0	7.0	6.0	4.6	4.8	2.0	.80	1.5
26	1.4	3.0	4.0	5.1	5.5	8.0	5.7	4.0	4.1	2.0	.89	1.8
27	1.4	2.8	3.7	3.3	12	12	5.7	3.5	3.9	2.0	11	2.0
28	1.4	2.8	3.3	3.0	7.5	14	6.0	7.8	3.6	1.9	20	1.8
29	1.2	2.8	3.0	2.8	------	12	5.9	23	3.6	2.0	4.0	1.7
30	1.2	2.8	2.8	5.5	------	9.7	5.5	54	3.5	2.9	2.7	2.0
31	1.7	------	4.1	8.9	------	8.3	------	45	------	2.6	2.1	------
TOTAL	48.95	151.0	143.0	215.4	260.5	299.4	278.5	339.2	228.7	100.9	89.79	84.1
MEAN	1.58	5.03	4.61	6.95	9.30	9.66	9.28	10.9	7.62	3.25	2.90	2.80
MAX	6.4	36	20	28	27	19	36	54	17	13	20	24
MIN	.73	1.4	1.7	2.8	2.4	6.0	5.5	3.5	3.5	1.9	.71	1.1
CFSM	.23	.74	.68	1.02	1.36	1.42	1.36	1.60	1.12	.48	.43	.41
IN.	.27	.82	.78	1.17	1.42	1.63	1.52	1.85	1.25	.55	.49	.46

CAL YR 1970 TOTAL 2,045.92 MEAN 5.61 MAX 47 MIN .12 CFSM .82 IN 11.16
WTR YR 1971 TOTAL 2,239.44 MEAN 6.14 MAX 54 MIN .71 CFSM .90 IN 12.22

PEAK DISCHARGE (BASE, 100 CFS).—NO PEAK ABOVE BASE.

01662000 RAPPAHANNOCK RIVER NEAR WARRENTON, VA.

LOCATION.--Lat 38°41'05", long 77°54'15", Fauquier County, on left bank 50 ft downstream from bridge on U.S. Highway 211, 0.9 mile downstream from Carter Run, 6.2 miles southwest of Warrenton, 15 miles upstream from Hazel River, and at mile 53.0.

DRAINAGE AREA.--195 sq mi.

PERIOD OF RECORD.--August 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 312.57 ft above mean sea level. Oct. 8, 1942, to Dec. 17, 1944, nonrecording gage 50 ft upstream at present datum.

AVERAGE DISCHARGE.--29 years, 180 cfs (12.54 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,020 cfs Feb. 14 (gage height, 11.83 ft); minimum, 7.3 cfs Oct. 10 (gage height, 1.54 ft).

Period of record: Maximum discharge, 32,000 cfs Oct. 15, 1942 (gage height, 23.5 ft, from floodmark), from rating curve extended above 24,000 cfs; minimum daily, 0.70 cfs Oct. 4, 5, 1954.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS) --WSP 1302: 1944(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	208	138	168	169	343	163	136	883	153	88	35
2	15	118	131	262	140	324	167	137	548	247	65	39
3	14	409	124	239	140	376	203	149	465	123	65	39
4	13	349	124	265	150	541	171	134	395	99	420	34
5	11	381	112	469	173	424	161	124	349	88	215	31
6	10	223	112	484	255	465	193	125	311	88	122	29
7	9.1	168	106	361	357	435	831	126	353	109	85	27
8	10	138	104	288	920	379	682	169	389	82	66	24
9	8.7	116	127	287	835	337	458	249	293	71	53	23
10	8.2	110	143	258	333	316	385	157	255	104	48	22
11	8.7	514	132	233	287	304	326	134	229	100	57	24
12	9.6	1,450	136	222	260	280	297	124	208	87	255	87
13	12	1,150	163	226	1,650	265	275	411	331	73	93	124
14	15	592	134	233	2,470	254	252	417	326	65	64	92
15	23	712	116	278	704	247	230	256	334	57	53	58
16	26	502	122	244	514	240	223	590	316	52	46	41
17	30	376	522	235	426	219	214	512	310	51	44	68
18	22	307	335	230	384	207	231	352	286	47	43	66
19	17	260	260	180	374	233	203	301	206	49	50	46
20	17	255	225	170	351	320	204	337	181	80	48	52
21	34	409	210	180	412	240	199	898	168	62	40	58
22	218	265	678	190	514	221	192	413	157	47	36	49
23	83	238	625	252	1,000	222	178	320	149	42	36	43
24	39	205	500	272	636	202	174	301	259	42	34	43
25	29	188	399	233	516	193	164	290	149	61	30	39
26	24	178	336	257	450	198	157	239	129	54	27	42
27	22	173	285	245	451	201	150	204	116	63	47	58
28	22	163	251	190	392	198	153	195	109	46	189	51
29	22	154	225	190	------	191	156	220	105	40	74	44
30	38	147	235	210	------	181	141	930	113	54	48	40
31	409	------	226	240	------	168	------	1,710	------	134	39	------
TOTAL	1,235.3	10,458	7,326	7,791	15,343	8,724	7,533	10,660	8,422	2,470	2,580	1,427
MEAN	39.8	349	236	251	548	281	251	344	281	79.7	83.2	47.6
MAX	409	1,450	678	484	2,470	541	831	1,710	883	247	420	124
MIN	8.2	110	104	168	140	168	141	124	105	40	27	22
CFSM	.20	1.79	1.21	1.29	2.81	1.44	1.29	1.76	1.44	.41	.43	.24
IN.	.24	2.00	1.40	1.49	2.93	1.66	1.44	2.03	1.61	.47	.49	.27

CAL YR 1970 TOTAL 67,281.3 MEAN 184 MAX 1,450 MIN 8.2 CFSM .94 IN 12.84
WTR YR 1971 TOTAL 83.969.3 MEAN 230 MAX 2,470 MIN 8.2 CFSM 1.18 IN 16.02

PEAK DISCHARGE (BASE, 1,800 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-12	0400	7.74	2,270	5-31	1130	7.87	2,340
2-14	0200	11.83	5,020				

01662500 RUSH RIVER AT WASHINGTON, VA.

LOCATION.--Lat 38°42'50", long 78°09'05", Rappahannock County, on left bank 20 ft upstream from bridge on old U.S. Highways 211 and 522 and 0.5 mile east of Washington.

DRAINAGE AREA.--14.7 sq mi.

PERIOD OF RECORD.--August 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 597.97 ft above mean sea level.

AVERAGE DISCHARGE.--18 years, 15.2 cfs (14.04 inches per year).

EXTREMES.--Current year: Maximum discharge, 600 cfs Nov. 12 (gage height, 4.32 ft); minimum, 0.03 cfs Sept. 11.
Period of record: Maximum discharge, 2,500 cfs Aug. 18, 1955 (gage height, 8.14 ft); no flow Sept. 4, 1953, and many days in 1954, 1963-66.

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.29	46	14	24	13	42	12	11	111	18	6.2	1.8
2	.28	30	13	24	12	38	13	12	68	14	5.6	2.1
3	.26	94	12	23	11	48	13	12	54	9.4	10	2.0
4	.26	72	12	32	11	48	12	10	40	7.2	26	1.5
5	.26	62	11	64	13	42	11	9.7	29	6.9	16	1.5
6	.26	41	11	67	15	43	22	10	24	6.9	6.0	1.2
7	.26	30	10	52	17	46	58	11	22	6.2	5.9	1.1
8	.25	24	9.7	42	33	43	45	12	18	4.3	3.7	.67
9	.27	19	9.7	36	26	40	35	10	14	4.0	2.5	.38
10	.34	25	9.7	31	25	36	29	9.0	12	4.3	2.0	.12
11	.81	111	9.7	29	18	34	25	8.7	10	5.0	4.6	.27
12	1.4	212	12	28	19	29	22	8.7	12	3.7	9.0	13
13	1.2	223	11	26	138	27	20	44	18	3.2	4.0	23
14	.97	131	9.7	31	135	25	18	42	21	2.7	2.5	18
15	1.4	145	9.4	40	92	23	17	31	35	1.8	1.8	12
16	1.4	101	16	36	70	21	16	67	26	1.8	1.8	11
17	1.4	78	72	32	55	19	16	56	21	1.5	1.8	10
18	1.5	64	47	29	48	18	15	46	16	1.5	1.8	8.7
19	1.4	56	37	27	43	21	15	37	13	3.4	1.6	9.7
20	1.4	68	32	25	46	22	14	72	12	3.4	1.6	25
21	14	52	38	21	46	18	14	106	12	2.0	1.4	21
22	14	41	90	19	70	17	14	77	11	1.5	1.4	18
23	6.2	34	77	25	94	17	14	58	11	1.3	1.5	15
24	3.7	26	70	21	80	15	13	50	10	1.5	1.3	14
25	3.2	23	55	20	68	15	13	43	11	2.1	1.3	11
26	2.5	20	46	19	58	15	12	34	8.3	2.5	1.3	13
27	2.1	19	40	22	56	15	12	26	7.6	1.8	14	12
28	2.5	17	32	35	48	15	12	26	6.9	1.4	8.7	11
29	4.6	17	27	58	------	15	12	34	7.6	1.3	3.7	8.7
30	45	15	26	19	------	15	11	166	10	6.5	2.1	8.3
31	113	------	25	14	------	13	------	156	------	14	1.6	------
TOTAL	226.41	1,896	893.9	971	1,360	835	555	1,295.1	671.4	145.1	155.7	275.04
MEAN	7.30	63.2	28.8	31.3	48.6	26.9	18.5	41.8	22.4	4.68	5.02	9.17
MAX	113	223	90	67	138	48	58	166	111	18	26	25
MIN	.25	15	9.4	14	11	13	11	8.7	6.9	1.3	1.3	.12
CFSM	.50	4.30	1.96	2.13	3.31	1.83	1.26	2.84	1.52	.32	.34	.62
IN.	.57	4.80	2.26	2.46	3.44	2.11	1.40	3.28	1.70	.37	.39	.70

CAL YR 1970 TOTAL 8,396.46 MEAN 23.0 MAX 280 MIN .25 CFSM 1.56 IN 21.25
WTR YR 1971 TOTAL 9,279.65 MEAN 25.4 MAX 223 MIN .12 CFSM 1.73 IN 23.48

PEAK DISCHARGE (BASE, 350 CFS).--NOV. 12 (2130) 600 CFS (4.32 FT).

01662800 BATTLE RUN NEAR LAUREL MILLS, VA.

LOCATION.--Lat 38°39'20", long 78°04'27" (revised), Rappahannock County, on left bank just upstream from bridge on State Highway 729, 0.8 mile upstream from mouth, and 1.0 mile northeast of Laurel Mills.

DRAINAGE AREA.--27.6 sq mi.

PERIOD OF RECORD.--April 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 374.62 ft above mean sea level.

AVERAGE DISCHARGE.--13 years, 22.0 cfs (10.82 inches per year).

EXTREMES.--Current year: Maximum discharge, 680 cfs Aug. 4 (gage height, 10.16 ft); minimum, 0.76 cfs Oct. 6 (gage height, 1.84 ft).

Period of record: Maximum discharge, 1,120 cfs May 21, 1960 (gage height, 11.37 ft), from rating curve extended above 700 cfs; no flow many days in September 1966.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	25	16	25	20	38	18	16	101	26	10	7.5
2	1.2	18	15	26	19	36	20	17	84	24	11	8.0
3	1.1	68	15	31	20	47	21	16	79	16	26	7.8
4	1.0	42	15	36	21	57	18	16	74	14	121	7.5
5	.98	37	13	53	27	50	18	15	72	14	27	7.5
6	.98	25	13	54	38	50	26	15	64	26	20	6.5
7	.98	19	12	44	59	46	66	16	75	18	16	6.5
8	.92	16	12	38	102	41	47	21	66	14	14	6.8
9	.98	14	13	36	60	37	40	16	58	12	13	6.8
10	1.1	27	13	33	48	36	33	14	53	13	12	6.8
11	1.2	124	12	30	41	34	30	14	46	12	16	8.2
12	1.3	140	15	30	37	32	30	14	50	12	15	14
13	1.6	138	15	31	183	31	27	48	64	11	12	14
14	1.7	66	13	35	99	30	25	33	60	9.9	11	8.2
15	3.2	80	12	38	69	29	24	25	64	8.5	11	7.2
16	3.8	57	20	35	60	27	23	56	58	8.5	9.9	5.6
17	2.2	45	56	32	54	25	24	45	52	8.2	9.8	9.9
18	1.9	37	33	31	48	24	24	35	46	8.0	9.9	6.8
19	2.4	31	30	29	45	31	22	30	42	10	11	7.5
20	2.0	42	25	27	44	31	21	74	40	8.8	9.6	7.5
21	16	38	28	25	40	25	21	100	35	6.0	9.6	6.0
22	19	31	88	24	56	24	19	74	32	6.0	9.6	6.0
23	5.3	27	66	36	72	24	19	63	36	4.0	9.6	5.8
24	4.0	23	59	31	60	22	19	58	32	4.9	8.0	6.0
25	3.4	21	50	30	54	21	18	54	28	5.1	8.0	5.6
26	3.4	20	43	33	49	22	17	47	24	7.5	8.0	7.6
27	3.2	19	38	35	48	22	17	44	22	7.8	19	6.8
28	3.0	18	33	39	40	22	18	42	21	6.5	14	6.0
29	5.0	18	30	31	------	21	18	57	21	7.2	9.2	5.6
30	36	17	28	29	------	20	21	137	20	12	8.0	6.0
31	58	------	25	25	------	19	------	150	------	14	7.5	------
TOTAL	188.14	1,283	856	1,032	1,513	974	744	1,362	1,519	354.9	495.7	222.0
MEAN	6.07	42.8	27.6	33.3	54.0	31.4	24.8	43.9	50.6	11.4	16.0	7.40
MAX	58	140	88	54	183	57	66	150	101	26	121	14
MIN	.92	14	12	24	19	19	17	14	20	4.0	7.5	5.6
CFSM	.22	1.55	1.00	1.21	1.96	1.14	.90	1.59	1.83	.41	.58	.27
IN.	.25	1.73	1.15	1.39	2.04	1.31	1.00	1.84	2.05	.48	.67	.30

CAL YR 1970 TOTAL 8,902.34 MEAN 24.4 MAX 249 MIN .92 CFSM .88 IN 12.00
WTR YR 1971 TOTAL 10,543.74 MEAN 28.9 MAX 183 MIN .92 CFSM 1.05 IN 14.21

PEAK DISCHARGE (BASE, 310 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-11	2200	7.56	350	5-20	2100	8.06	400
11-12	2400	9.20	560	8- 4	0100	10.16	680
2-13	1600	7.86	380				

01663500 HAZEL RIVER AT RIXEYVILLE, VA.

LOCATION.--Lat 38°35'30", long 77°57'55", Culpeper County, on right bank at downstream side of bridge on State Highway 229, 0.4 mile upstream from Waterford Run, 1.1 miles northeast of Rixeyville, 2.8 miles downstream from Thornton River, and 9.1 miles upstream from mouth.

DRAINAGE AREA.--287 sq mi.

PERIOD OF RECORD.--August 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 288.30 ft above mean sea level.

AVERAGE DISCHARGE.--29 years, 314 cfs (14.86 inches per year).

EXTREMES.--Current year: Maximum discharge, 7,490 cfs Nov. 13 (gage height, 15.55 ft); minimum, 14 cfs Oct. 7, 9 (gage height, 1.85 ft).

Period of record: Maximum discharge, 60,000 cfs Oct. 15, 1942 (gage height, 31.8 ft), from rating curve extended above 27,000 cfs; minimum, 1.1 cfs Sept. 10-13, 1966 (gage height, 1.69 ft).

Flood of Apr. 26, 1937, reached a stage of 28.4 ft, from floodmarks (discharge, 43,500 cfs), from information by local residents.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 971: 1942. WSP 1622: 1957-58. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	1,230	258	286	241	537	271	221	1,790	170	172	75
2	20	667	246	411	210	526	272	218	1,220	198	136	77
3	20	1,410	234	342	210	689	298	230	958	166	160	78
4	19	1,150	234	402	230	1,040	270	217	739	144	1,230	71
5	16	973	215	778	266	748	260	206	598	135	945	65
6	16	618	213	984	385	737	294	207	499	201	361	61
7	15	449	199	717	510	705	1,100	204	572	317	241	60
8	15	361	193	556	1,260	625	769	260	775	159	184	75
9	14	304	196	481	1,160	558	629	237	426	130	151	61
10	15	295	197	425	505	516	624	205	358	150	131	53
11	16	1,730	190	389	424	495	563	192	313	158	124	63
12	50	2,770	204	370	379	454	506	176	309	210	211	135
13	72	4,390	239	372	2,270	432	466	596	365	154	143	518
14	41	1,890	202	383	2,870	409	419	698	458	132	113	384
15	46	1,990	186	495	1,380	387	380	376	763	117	102	239
16	69	1,400	196	428	1,010	373	363	914	588	111	93	157
17	44	1,040	861	384	757	340	347	842	471	117	89	138
18	30	816	591	371	674	325	355	595	386	100	88	141
19	27	658	445	310	607	366	319	466	331	106	95	122
20	28	600	383	290	596	505	301	390	287	128	93	795
21	54	879	360	300	591	371	293	1,050	291	114	82	551
22	807	573	1,150	320	720	344	283	630	259	94	74	344
23	211	494	1,200	392	1,500	345	267	465	237	85	73	260
24	126	414	925	391	1,050	320	264	394	270	81	68	220
25	97	370	714	348	868	303	253	363	223	84	59	180
26	84	346	598	363	746	311	243	325	200	85	55	168
27	75	328	489	321	731	319	235	283	186	96	82	212
28	69	307	423	268	620	326	240	270	173	84	358	167
29	66	286	368	311	------	313	241	327	169	77	190	149
30	178	273	347	348	------	296	225	2,200	179	95	100	133
31	2,630	------	348	310	------	279	------	2,970	------	225	83	------
TOTAL	4,990	29,011	12,604	12,846	22,810	14,294	11,350	16,727	14,393	4,223	6,046	5,752
MEAN	161	967	407	414	815	461	378	540	480	136	195	192
MAX	2,630	4,390	1,200	984	2,870	1,040	1,100	2,970	1,790	317	1,230	795
MIN	14	273	186	268	210	279	225	176	169	77	55	53
CFSM	.56	3.37	1.42	1.44	2.84	1.61	1.32	1.88	1.67	.47	.68	.67
IN.	.65	3.76	1.63	1.67	2.96	1.85	1.47	2.17	1.87	.55	.78	.75

CAL YR 1970 TOTAL 134,011 MEAN 367 MAX 4,390 MIN 14 CFSM 1.28 IN 17.37
WTR YR 1971 TOTAL 155,046 MEAN 425 MAX 4.390 MIN 14 CFSM 1.48 IN 20.10

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	1200	10.01	3,360	2-13	2300	14.08	5,820
11- 3	1600	8.92	2,810	5-30	1830	11.48	4,110
11-13	0800	15.55	7,490	8- 4	0700	9.85	3,280

01664000 RAPPAHANNOCK RIVER AT REMINGTON, VA.

LOCATION.--Lat 38°31'50", long 77°48'50", Fauquier County, on left bank 80 ft upstream from bridge on U.S. Highway 29 at Remington, 0.3 mile upstream from Tinpot Run, 0.4 mile downstream from Ruffans Run, 2.5 miles downstream from Hazel River, and at mile 35.7.

DRAINAGE AREA.--620 sq mi.

PERIOD OF RECORD.--October 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 252.53 ft above mean sea level. Prior to Nov. 21, 1951, nonrecording gage at bridge 80 ft downstream at same datum.

AVERAGE DISCHARGE.--29 years, 623 cfs (13.65 inches per year).

EXTREMES.--Current year: Maximum discharge, 12,200 cfs Feb. 14 (gage height, 15.46 ft); minimum, 23 cfs Oct. 7-10 (gage height, 2.69 ft).

Period of record: Maximum discharge, 90,000 cfs Oct. 16, 1942 (gage height, 30.0 ft, from floodmarks), from rating curve extended above 43,000 cfs on basis of slope-area determination of peak flow; minimum, 2.8 cfs Sept. 13, 1966 (gage height, 2.31 ft).

Maximum flood since at least 1828, that of Oct. 16, 1942.

REMARKS.--Records good. Water-quality records for the current year are included in this report.

REVISIONS (WATER YEARS).--WSP 1171: 1944. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	1,610	475	552	535	1,110	496	390	3,640	307	333	125
2	33	849	445	749	415	1,030	495	382	2,120	489	216	119
3	31	1,230	422	755	449	1,300	582	411	1,630	340	232	128
4	30	1,840	408	770	490	2,530	522	358	1,280	272	1,290	121
5	28	1,400	376	1,550	517	1,560	481	357	1,150	242	1,320	110
6	25	1,010	355	2,000	767	1,470	515	353	943	240	639	102
7	26	731	337	1,390	1,080	1,360	2,510	359	891	513	404	95
8	25	582	322	1,080	3,240	1,220	2,130	450	1,530	293	301	101
9	24	479	325	983	3,190	1,090	1,360	556	869	230	238	97
10	25	415	333	848	1,220	1,000	1,180	425	691	226	201	86
11	25	1,570	328	828	961	964	1,040	359	598	307	181	83
12	25	5,140	341	764	855	898	945	338	571	304	391	156
13	76	5,920	443	777	3,100	844	874	1,110	784	268	340	557
14	54	3,150	388	906	9,820	806	804	1,540	897	220	209	556
15	48	3,360	336	1,030	3,040	773	721	854	1,200	193	171	350
16	92	2,320	339	958	2,060	753	688	2,150	1,070	177	151	239
17	82	1,600	1,570	799	1,590	680	655	1,970	907	185	141	195
18	59	1,300	1,270	817	1,360	633	678	1,190	741	166	138	247
19	47	1,000	930	708	1,250	671	618	947	624	162	145	191
20	41	960	794	629	1,220	1,020	562	841	545	206	152	556
21	52	1,500	717	656	1,250	792	543	2,430	509	209	139	666
22	710	1,000	2,100	662	1,500	691	528	1,330	469	164	122	445
23	432	900	2,580	771	3,560	688	496	978	421	140	112	337
24	191	750	1,710	924	2,240	640	486	817	555	128	110	279
25	127	690	1,350	785	1,710	590	463	737	438	133	99	239
26	100	634	1,150	810	1,450	590	440	653	362	146	89	207
27	89	607	977	812	1,420	619	424	559	333	150	106	255
28	82	576	863	611	1,270	612	428	521	307	141	498	246
29	78	533	745	603	------	594	448	609	296	119	336	209
30	101	505	737	679	------	564	407	3,470	309	124	191	186
31	2,230	------	747	728	------	517	------	6,750	------	255	145	------
TOTAL	5,024	44,150	24,213	26,834	51,588	28,609	22,519	34,224	26,670	7,049	9,140	7,283
MEAN	162	1,472	781	866	1,842	923	751	1,104	889	227	295	243
MAX	2,230	5,920	2,580	2,000	9,820	2,530	2,510	6,750	3,640	513	1,320	666
MIN	24	415	322	552	415	517	407	338	296	119	89	83
CFSM	.26	2.37	1.26	1.40	2.97	1.49	1.21	1.78	1.43	.37	.48	.39
IN.	.30	2.65	1.45	1.61	3.10	1.72	1.35	2.05	1.60	.42	.55	.44

CAL YR 1970 TOTAL 241,350 MEAN 661 MAX 5,920 MIN 24 CFSM 1.07 IN 14.48
WTR YR 1971 TOTAL 287,303 MEAN 787 MAX 9,820 MIN 24 CFSM 1.27 IN 17.24

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-13	1615	12.95	7,930	5-31	0145	12.42	7,360
2-14	0800	15.46	12,200				

01665000 MOUNTAIN RUN NEAR CULPEPER, VA.

LOCATION.--Lat 38°28'50", long 78°03'10", Culpeper County, on left bank 30 ft upstream from bridge on State Highway 641, 3.0 miles west of Culpeper, and 14.5 miles upstream from Jonas Run.

DRAINAGE AREA.--15.9 sq mi, of which 10.9 sq mi are above flood-detention structures.

PERIOD OF RECORD.--September 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 389.46 ft above mean sea level.

AVERAGE DISCHARGE.--22 years, 14.5 cfs (12.38 inches per year).

EXTREMES.--Current year: Maximum discharge, 760 cfs Nov. 12 (gage height, 7.11 ft); minimum, 1.7 cfs Oct. 20, 21 (gage height, 1.49 ft).

Period of record: Maximum discharge, 5,440 cfs Aug. 18, 1955, from rating curve extended above 910 cfs on basis of slope-area measurement of peak flow; maximum gage height, 11.20 ft Dec. 4, 1950; minimum discharge, 0.09 cfs Sept. 30, Oct. 1, 1954.

REMARKS.--Records good. Some regulation since 1959 by two reservoirs (combined flood storage, 2,240 acre-ft; 531 acre-ft additional storage used for low-water regulation for municipal supply for town of Culpeper). Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1332: 1950-51. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	14	9.0	17	11	19	11	8.5	95	7.2	5.4	4.5
2	5.1	9.0	9.0	15	9.6	19	12	8.5	59	8.3	7.8	4.5
3	5.2	30	8.7	13	9.3	50	15	9.0	26	7.6	7.4	4.5
4	5.1	18	9.3	20	10	85	12	8.3	20	6.7	70	4.0
5	5.1	14	8.0	55	14	40	11	7.8	16	6.0	80	3.8
6	4.9	9.3	8.0	49	22	30	21	8.0	15	6.1	20	4.9
7	4.9	7.6	7.6	42	40	26	107	8.0	22	7.6	9.0	4.5
8	4.7	6.7	7.6	23	110	22	49	12	23	6.1	6.7	3.8
9	4.9	6.1	7.8	20	75	18	29	11	14	5.4	5.6	3.5
10	5.6	10	8.5	17	30	18	22	8.7	11	5.4	4.9	3.2
11	6.0	134	8.5	16	20	18	18	8.0	10	7.2	5.6	10
12	6.0	197	12	16	18	16	16	7.6	10	10	8.7	15
13	6.1	261	13	17	148	16	15	76	11	7.2	6.3	12
14	6.3	178	11	24	180	16	14	44	22	5.4	5.1	8.7
15	7.4	110	9.3	28	99	16	12	22	30	4.5	4.5	6.5
16	9.3	81	18	24	76	15	12	102	22	4.2	4.2	5.4
17	7.4	54	47	23	34	14	12	50	17	4.2	4.0	5.6
18	7.2	35	26	19	24	13	12	25	14	3.5	4.2	5.4
19	6.0	26	19	16	22	20	11	19	12	4.4	4.7	5.4
20	2.8	19	16	13	22	24	11	29	11	5.1	4.5	5.2
21	13	21	18	12	20	18	10	122	9.9	4.2	4.0	4.9
22	22	16	57	12	44	15	10	39	9.6	3.5	3.8	4.9
23	6.5	14	43	18	83	15	9.6	24	9.0	3.3	3.8	4.9
24	4.5	12	30	20	40	13	9.9	18	10	2.9	3.3	4.5
25	3.7	11	22	20	29	12	9.0	15	8.7	3.0	2.9	4.4
26	3.3	11	19	20	25	14	9.0	12	8.0	2.8	2.8	5.1
27	3.2	11	16	18	27	14	8.5	11	7.6	3.0	11	5.4
28	3.2	10	14	14	22	14	8.7	11	7.4	2.9	16	5.2
29	3.2	10	13	13	------	14	9.0	25	7.2	3.0	8.0	4.4
30	16	9.9	12	14	------	13	8.5	204	7.4	4.5	5.8	4.2
31	50	------	12	13	------	12	------	173	------	5.2	4.9	------
TOTAL	243.7	1,345.6	519.3	641	1,263.9	649	514.2	1,126.4	544.8	160.4	334.9	168.3
MEAN	7.86	44.9	16.8	20.7	45.1	20.9	17.1	36.3	18.2	5.17	10.8	5.61
MAX	50	261	57	55	180	85	107	204	95	10	80	15
MIN	2.8	6.1	7.6	12	9.3	12	8.5	7.6	7.2	2.8	2.8	3.2
CFSM	.49	2.82	1.06	1.30	2.84	1.31	1.08	2.28	1.14	.33	.68	.35
IN.	.57	3.15	1.21	1.50	2.96	1.52	1.20	2.64	1.27	.38	.73	.39

CAL YR 1970 TOTAL 5,769.2 MEAN 15.8 MAX 261 MIN 2.0 CFSM .99 IN 13.50
WTR YR 1971 TOTAL 7,511.5 MEAN 20.6 MAX 261 MIN 2.8 CFSM 1.30 IN 17.57

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-12	2230	7.11	760	5-30	0730	5.20	338
2-13	1830	5.54	396	8- 4	1800	6.05	485

01665500 RAPIDAN RIVER NEAR RUCKERSVILLE, VA.

LOCATION.--Lat 38°16'50", long 78°20'25", Madison County, on left bank at upstream side of bridge on U.S. Highway 29, 0.2 mile downstream from Elk Run, 1.7 miles upstream from White Run, 2.1 miles downstream from South River, 3.6 miles northeast of Ruckersville, and at mile 63.5.

DRAINAGE AREA.--114 sq mi.

PERIOD OF RECORD.--September 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 439.44 ft above mean sea level.

AVERAGE DISCHARGE.--29 years, 135 cfs (16.08 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,290 cfs May 30 (gage height, 9.98 ft); minimum, 7.0 cfs Oct. 8, 9 (gage height, 0.65 ft).
Period of record: Maximum discharge, 30,700 cfs Oct. 15, 1942 (gage height, 20.8 ft, from floodmark in gage house), from rating curve extended above 12,000 cfs on basis of slope-area measurement at gage height 17.78 ft; minimum daily, 0.90 cfs Sept. 12, 1966.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1171: 1944-45(M). WSP 1382: 1943(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	512	109	128	90	206	101	82	827	124	56	29
2	9.5	320	103	120	70	201	102	81	622	117	49	31
3	9.5	550	98	106	78	306	102	81	495	83	54	30
4	8.0	443	93	129	78	352	96	76	403	71	316	27
5	7.5	385	87	369	99	262	93	73	336	65	231	25
6	7.5	291	84	385	115	237	133	73	292	137	118	34
7	7.5	255	79	295	158	227	503	72	292	121	84	28
8	7.5	216	75	245	271	208	318	94	331	74	65	26
9	7.5	189	74	218	215	193	259	81	328	63	54	24
10	7.5	179	73	193	148	184	241	71	283	84	48	23
11	8.0	577	71	177	133	179	223	66	259	75	71	32
12	10	625	90	165	122	165	208	65	230	72	86	114
13	13	500	90	157	1,190	157	194	421	218	56	53	342
14	12	383	76	162	819	149	178	276	239	51	43	173
15	17	500	70	170	475	144	166	204	479	46	39	120
16	25	364	94	152	358	137	157	418	406	45	36	93
17	13	300	194	142	288	129	149	328	306	43	35	137
18	12	268	146	136	253	123	142	271	276	38	36	100
19	12	267	131	122	225	141	131	239	223	45	36	89
20	12	278	120	126	217	152	125	634	195	50	38	110
21	99	277	130	126	204	130	121	931	180	40	33	120
22	149	267	277	113	262	125	116	472	165	35	30	114
23	52	240	259	123	418	126	110	344	161	34	32	108
24	34	183	223	114	320	118	108	279	145	32	26	99
25	28	166	195	112	279	114	101	244	121	31	24	88
26	25	154	178	111	253	117	96	209	111	31	23	94
27	25	144	160	93	254	117	93	182	101	31	48	97
28	23	133	145	90	224	119	95	173	94	32	86	86
29	25	124	132	100	------	116	91	231	96	45	46	80
30	359	119	123	107	------	110	85	2,230	101	56	35	72
31	1,440	------	118	92	------	104	------	1,420	------	74	30	------
TOTAL	2,474.5	9,209	3,897	4,878	7,606	5,148	4,637	10,421	8,313	1,901	1,963	2,549
MEAN	79.8	307	126	157	272	166	155	336	277	61.3	63.3	85.0
MAX	1,440	625	277	385	1,190	352	503	2,230	827	137	316	342
MIN	7.5	119	70	90	70	104	85	65	94	31	23	23
CFSM	.70	2.69	1.11	1.38	2.39	1.46	1.36	2.95	2.43	.54	.56	.75
IN.	.81	3.01	1.27	1.59	2.48	1.68	1.51	3.40	2.71	.62	.64	.83

CAL YR 1970 TOTAL 50,839.0 MEAN 139 MAX 1,440 MIN 7.5 CFSM 1.22 IN 16.59
WTR YR 1971 TOTAL 62,996.5 MEAN 173 MAX 2,230 MIN 7.5 CFSM 1.52 IN 20.56

PEAK DISCHARGE (BASE, 1,400 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	0700	7.06	2,440	5-30	1230	9.98	4,290
2-13	1700	7.46	2,680	8- 4	2100	5.28	1,490
5-20	2100	7.71	2,830				

01666500 ROBINSON RIVER NEAR LOCUST DALE, VA.

LOCATION.--Lat 38°19'30", long 78°05'45", Madison County, on right bank 100 ft upstream from bridge on State Highway 614, 1.1 miles upstream from Great Run, 1.7 miles upstream from mouth, 2.0 miles southeast of Locust Dale, and 3.4 miles downstream from Crooked Run.

DRAINAGE AREA.--179 sq mi.

PERIOD OF RECORD.--July 1943 to current year. Prior to October 1965, published as Robertson River near Locust Dale.

GAGE.--Water-stage recorder. Datum of gage is 283.70 ft above mean sea level.

AVERAGE DISCHARGE.--28 years, 197 cfs (14.95 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,420 cfs May 30 (gage height, 14.00 ft); minimum, 16 cfs Oct. 5 (gage height, 0.84 ft).

Period of record: Maximum discharge, 18,600 cfs Aug. 18, 1955 (gage height, 19.49 ft), from rating curve extended above 9,100 cfs on basis of records for other stations in Rappahannock River basin; minimum, 1.2 cfs Sept. 7, 13, 1954; minimum daily, 1.8 cfs Sept. 13, 27, 1954.

Flood of Oct. 15, 1942, reached a stage of 23.9 ft, from floodmarks (discharge, about 44,000 cfs).

REMARKS.--Records good except those for period of no gage-height record, which are fair. Small diurnal fluctuation at low flow caused by Banco Mill 9 miles upstream at State Highway 231. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1171: 1948(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	768	166	194	150	291	164	131	1,010	191	123	82
2	22	495	161	223	120	281	164	129	727	500	136	80
3	21	678	153	202	130	459	174	132	612	177	161	82
4	19	582	151	207	157	705	160	125	503	139	620	77
5	16	480	141	537	188	428	155	119	432	125	840	72
6	17	369	140	592	247	371	199	119	380	189	293	68
7	17	300	131	426	345	348	896	117	401	345	201	70
8	17	253	128	341	802	322	477	149	502	154	157	66
9	17	218	130	301	564	296	358	142	426	129	133	63
10	17	209	128	268	292	278	332	120	285	153	118	60
11	18	1,200	124	248	242	265	304	113	249	188	122	62
12	62	1,320	142	237	222	246	282	109	231	299	200	105
13	29	1,490	156	233	1,520	235	263	531	248	154	123	250
14	25	717	133	261	1,790	227	242	434	245	130	104	350
15	26	984	125	327	669	221	223	263	373	115	94	205
16	77	640	167	276	492	214	215	778	376	113	87	160
17	34	499	451	244	401	198	204	504	301	107	85	150
18	29	417	291	230	350	190	202	355	248	100	86	155
19	27	356	243	200	319	218	185	285	218	106	97	130
20	26	330	218	180	309	268	178	993	195	113	102	160
21	79	391	217	180	294	215	174	1,680	208	98	81	200
22	570	326	507	186	373	201	167	543	236	89	75	175
23	158	295	463	222	725	203	160	401	181	88	78	155
24	101	259	373	217	450	191	158	325	176	85	68	140
25	79	235	310	209	413	183	150	289	157	82	63	125
26	69	222	277	219	364	189	145	255	143	80	60	115
27	62	209	244	193	366	190	141	220	136	82	192	130
28	57	197	221	150	322	195	143	208	126	79	290	115
29	56	186	200	170	------	188	143	327	126	80	130	105
30	296	176	195	190	------	179	133	3,190	129	95	99	98
31	1,860	------	181	170	------	168	------	2,340	------	129	92	------
TOTAL	3,924	14,801	6,667	7,833	12,656	8,163	6,891	15,426	9,580	4,514	5,110	3,805
MEAN	127	493	215	253	452	263	230	498	319	146	165	127
MAX	1,860	1,490	507	592	1,790	705	896	3,190	1,010	500	840	350
MIN	16	176	124	150	120	168	133	109	126	79	60	60
CFSM	.71	2.75	1.20	1.41	2.53	1.47	1.28	2.78	1.78	.82	.92	.71
IN.	.82	3.08	1.39	1.63	2.63	1.70	1.43	3.21	1.99	.94	1.06	.79

CAL YR 1970 TOTAL 74,888 MEAN 205 MAX 1,860 MIN 16 CFSM 1.15 IN 15.56
WTR YR 1971 TOTAL 99,370 MEAN 272 MAX 3,190 MIN 16 CFSM 1.52 IN 20.65

PEAK DISCHARGE (BASE, 1,700 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	1130	9.12	2,450	5-20	2130	12.53	4,120
11-11	2200	8.12	2,060	5-30	1730	14.00	5,420
11-13	0630	8.27	2,110	8- 4	2400	7.99	2,020
2-13	2130	12.24	3,940				

NOTE.--NO GAGE-HEIGHT RECORD AUG. 30 TO SEPT. 30.

01667500 RAPIDAN RIVER NEAR CULPEPER, VA.

LOCATION.--Lat 38°21'01", long 77°58'31", Culpeper County, on left bank 0.7 mile upstream from Cedar Run and bridge on U.S. Highway 522, 8.5 miles south of Culpeper, and at mile 29.6.

DRAINAGE AREA.--472 sq mi.

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 241.36 ft above mean sea level.

AVERAGE DISCHARGE.--41 years, 489 cfs (14.07 inches per year).

EXTREMES.--Current year: Maximum discharge, 9,560 cfs May 31 (gage height, 12.73 ft); minimum, 28 cfs Oct. 8 (gage height, 0.38 ft).

Period of record: Maximum discharge, 58,100 cfs Oct. 16, 1942 (gage height, 30.3 ft, from floodmark), from rating curve extended above 28,000 cfs on basis of slope-area measurement of peak flow; minimum, 2.1 cfs Oct. 4, 5, 11, 1954; minimum daily, 2.2 cfs Oct. 4, 1954.

REMARKS.--Records good. Diurnal fluctuation at low flow caused by mills at Rapidan and on Robinson River at State Highway 231. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 741: 1931. WSP 801: 1934(M), 1936(M). WSP 1081: 1943-46. WSP 1171: 1932(M), 1933-35. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	1,850	375	320	386	698	375	297	2,910	297	305	178
2	40	1,140	360	523	248	669	375	292	1,920	1,080	250	174
3	40	1,230	345	442	350	1,100	403	298	1,610	410	308	177
4	39	1,340	335	466	355	2,110	370	284	1,230	308	814	163
5	35	1,140	305	1,100	352	1,180	350	268	1,070	270	2,130	149
6	33	864	300	1,580	601	952	397	263	895	268	621	147
7	33	690	285	1,140	676	864	2,310	266	811	760	411	150
8	33	581	271	888	2,050	780	1,460	321	1,070	362	318	137
9	32	497	271	765	1,790	705	968	340	1,230	281	260	130
10	34	460	271	676	825	655	818	276	755	290	224	124
11	35	1,880	262	627	648	634	735	252	609	368	209	127
12	66	2,790	290	601	562	588	676	238	547	527	421	207
13	55	3,300	403	588	2,510	562	627	1,190	599	320	275	678
14	45	1,490	320	641	5,610	536	581	1,180	829	265	201	857
15	47	2,260	280	825	1,870	516	529	683	1,980	231	178	439
16	86	1,410	320	743	1,330	510	503	1,930	1,540	213	162	325
17	95	1,100	1,160	627	1,060	466	478	1,420	1,200	218	154	306
18	57	920	735	581	904	442	472	956	873	202	157	327
19	50	788	575	490	803	478	436	763	703	212	185	267
20	47	705	510	436	765	662	414	1,350	611	242	202	334
21	59	880	484	478	720	516	403	4,850	595	212	159	448
22	818	728	1,140	516	780	466	386	1,650	591	188	144	387
23	386	662	1,220	542	1,950	460	365	1,100	485	175	142	338
24	198	598	952	568	1,260	442	365	872	472	171	139	306
25	143	529	765	529	1,030	414	345	753	409	164	119	265
26	119	497	683	549	904	425	335	653	368	164	111	239
27	105	472	594	478	896	442	320	561	343	166	333	282
28	97	442	536	335	795	472	317	521	315	164	705	249
29	93	419	478	414	------	448	335	864	302	165	325	219
30	173	397	430	478	------	425	307	6,030	313	211	214	201
31	3,510	------	448	460	------	392	------	7,390	------	253	203	------
TOTAL	6,645	32,049	15,733	19,406	32,070	20,009	16,755	38,111	27,185	9,157	10,379	8,330
MEAN	214	1,068	507	626	1,145	645	559	1,229	906	295	335	278
MAX	3,510	3,300	1,220	1,580	5,610	2,110	2,310	7,390	2,910	1,080	2,130	857
MIN	32	397	262	320	248	392	307	238	302	164	111	124
CFSM	.45	2.26	1.07	1.33	2.43	1.37	1.18	2.60	1.92	.63	.71	.59
IN.	.52	2.53	1.24	1.53	2.53	1.58	1.32	3.00	2.14	.72	.82	.66

CAL YR 1970	TOTAL 179,628	MEAN 492	MAX 3,510	MIN 32	CFSM 1.04	IN 14.16
WTR YR 1971	TOTAL 235,799	MEAN 646	MAX 7,390	MIN 32	CFSM 1.37	IN 18.58

PEAK DISCHARGE (BASE, 4,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	1345	6.66	4,630	5-21	0200	10.32	7,560
2-14	0330	10.93	8,040	5-31	0300	12.73	9,560

01668000 RAPPAHANNOCK RIVER NEAR FREDERICKSBURG, VA.

LOCATION.--Lat 38°19'20", long 77°31'05", Spotsylvania County, on right bank 1.6 miles upstream from dam of Virginia Electric & Power Co., 2.2 miles downstream from Motts Run, 3.8 miles upstream from Fredericksburg, and at mile 4.4.

DRAINAGE AREA.--1,596 sq mi.

PERIOD OF RECORD.--September 1907 to current year. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 55.18 ft above mean sea level. Prior to Jan. 15, 1922, nonrecording gage, and Jan. 15, 1922, to Aug. 2, 1966, water-stage recorder at same site at datum 1.0 ft higher.

AVERAGE DISCHARGE.--64 years, 1,598 cfs (13.60 inches per year).

EXTREMES.--Current year: Maximum discharge, 29,000 cfs May 31 (gage height, 10.81 ft); minimum, 94 cfs Oct. 9 (gage height, 1.22 ft).

Period of record: Maximum discharge, 140,000 cfs Oct. 16, 1942 (gage height, 26.9 ft, present datum, from floodmarks), from rating curve extended above 76,000 cfs on basis of flow over dam and slope-area measurements at gage heights 26.1 and 26.9 ft, present datum; minimum, 5 cfs Oct. 11, 12, 1930.

Flood in June 1889 was probably several feet lower than that of Oct. 16, 1942.

REMARKS.--Records good except those for period of no gage-height record, which are fair. Water-quality records for the current year are included in this report.

REVISIONS (WATER YEARS).--WSP 801: 1924(M). WSP 951: 1937(M). WSP 1302: 1907-12, 1913(M), 1916(M), 1918(M), 1920-21(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	6,000	881	1,500	900	2,270	1,050	808	12,700	1,000	554	354
2	124	2,540	822	2,000	840	2,040	1,030	793	5,500	2,300	638	320
3	120	1,680	784	1,600	780	3,000	1,250	793	4,390	1,100	506	305
4	114	4,070	751	2,200	760	9,690	1,270	810	3,860	740	1,070	308
5	109	4,370	726	5,200	760	4,760	1,080	754	3,220	660	4,970	298
6	105	2,590	666	6,200	1,100	3,290	1,240	719	2,460	900	2,600	283
7	103	1,710	645	4,040	1,800	2,890	8,200	724	2,100	1,800	1,200	278
8	99	1,300	605	2,790	10,300	2,550	8,160	786	4,000	1,100	762	273
9	96	1,060	586	2,180	9,590	2,220	3,690	1,040	2,900	680	579	265
10	98	905	598	1,880	3,700	2,010	2,710	983	2,000	700	483	260
11	98	2,270	605	1,710	2,240	1,900	2,320	765	1,400	900	428	249
12	96	11,400	629	1,620	1,910	1,800	2,060	699	1,300	1,400	417	325
13	96	11,700	794	1,680	4,090	1,660	1,890	3,790	1,600	840	802	507
14	109	7,880	895	1,770	25,200	1,580	1,730	5,490	2,500	620	531	1,510
15	199	8,560	710	2,880	9,220	1,500	1,540	2,630	4,500	520	403	1,150
16	179	6,370	677	2,710	4,570	1,470	1,430	7,600	3,600	466	364	653
17	170	3,590	3,840	1,990	3,420	1,380	1,380	7,460	3,000	434	339	485
18	248	2,730	3,430	1,670	2,830	1,240	1,370	3,330	2,400	433	326	442
19	223	2,260	2,070	1,440	2,510	1,270	1,340	2,343	1,900	470	352	496
20	181	1,940	1,640	1,300	2,380	2,550	1,200	1,910	1,600	478	365	442
21	179	2,200	1,400	1,400	2,430	2,020	1,130	10,600	1,450	487	384	943
22	220	2,180	4,070	1,400	2,380	1,520	1,100	5,300	1,300	452	335	904
23	1,770	1,740	6,850	1,800	9,500	1,420	1,040	2,910	1,250	394	303	691
24	682	1,520	3,830	1,990	5,520	1,370	993	2,200	1,350	364	289	582
25	411	1,290	2,900	1,650	3,690	1,220	969	1,880	1,100	350	281	511
26	324	1,160	2,300	1,720	3,020	1,190	924	1,650	1,000	343	262	462
27	282	1,100	1,950	1,740	2,880	1,260	887	1,420	850	367	387	433
28	258	1,050	1,660	1,200	2,780	1,410	864	1,250	790	355	1,240	505
29	245	985	1,430	930	------	1,380	888	1,610	760	361	1,370	461
30	254	925	1,250	1,420	------	1,260	876	12,200	770	388	614	419
31	2,440	------	1,290	1,050	------	1,150	------	26,300	------	425	417	------
TOTAL	9,751	99,075	51,284	64,660	121,100	66,270	55,611	111,541	77,550	21,827	23,571	15,114
MEAN	315	3,303	1,654	2,086	4,325	2,138	1,854	3,598	2,585	704	760	504
MAX	2,440	11,700	6,850	6,200	25,200	9,690	8,200	26,300	12,700	2,300	4,970	1,510
MIN	96	905	586	930	760	1,150	864	699	760	343	262	249
CFSM	.20	2.07	1.04	1.31	2.71	1.34	1.16	2.25	1.62	.44	.48	.32
IN.	.23	2.31	1.20	1.51	2.82	1.54	1.30	2.60	1.81	.51	.55	.35

CAL YR 1970 TOTAL 561,840 MEAN 1,539 MAX 11,700 MIN 96 CFSM .96 IN 13.10
WTR YR 1971 TOTAL 717,354 MEAN 1,965 MAX 26,300 MIN 96 CFSM 1.23 IN 14.72

PEAK DISCHARGE (BASE, 16,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-14	1500	10.66	28,100	5-31	0900	10.81	29,000

NOTE.--NO GAGE-HEIGHT RECORD JUNE 7 TO JULY 15.

01668500 CAT POINT CREEK NEAR MONTROSS, VA.

LOCATION.--Lat 38°02'23", long 76°49'38", Richmond County, on right bank 10 ft upstream from bridge on State Highway 637, 1.7 miles west of Farmers Fork, 3.8 miles south of Montross, and 11.4 miles upstream from mouth.

DRAINAGE AREA.--45.6 sq mi.

PERIOD OF RECORD.--September 1943 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2.93 ft above mean sea level. Prior to Aug. 19, 1953, nonrecording gage near right bank at downstream side of highway bridge at same datum.

AVERAGE DISCHARGE.--28 years, 40.2 cfs (11.97 inches per year).

EXTREMES.--Current year: Maximum discharge, 645 cfs May 31 (gage height, 6.26 ft); minimum, 0.24 cfs Oct. 9 (gage height, 1.17 ft).
Period of record: Maximum discharge, 6,820 cfs Aug. 20, 1969 (gage height, 10.45 ft); no flow Sept. 18-20, 1943, many days in 1957, 1959, part of July 23, 1960, and many days in 1966.
Flood in September 1935 was over bridge floor (elevation, 9.3 ft).

REMARKS.--Records good. Slight diurnal fluctuation at low flow caused by gristmill at Montross. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1382: 1944(M), 1945, 1946-51(M), 1952(P), 1953-54(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	7.9	14	32	30	43	36	28	290	16	22	18
2	.55	7.4	14	37	22	39	34	28	174	21	15	14
3	.55	7.8	14	29	16	50	41	28	119	22	12	12
4	.45	9.2	14	27	20	75	38	26	90	20	19	10
5	.30	22	13	26	24	64	36	24	69	18	33	9.2
6	.26	22	12	153	31	51	61	24	52	16	34	8.4
7	.26	21	12	100	62	48	190	34	47	17	25	7.4
8	.26	17	11	51	154	44	156	62	48	14	17	7.0
9	.26	14	12	41	193	40	95	63	39	13	14	6.7
10	.26	13	12	36	136	37	68	46	36	11	12	6.4
11	.28	79	13	35	90	36	54	34	34	11	12	11
12	.35	117	18	33	57	35	49	28	32	14	11	106
13	.50	95	26	31	82	34	47	32	38	12	9.6	191
14	.60	50	26	34	111	34	43	36	43	11	8.8	68
15	.70	102	22	38	99	34	40	37	37	9.2	8.0	34
16	3.1	103	24	40	71	35	39	177	60	8.5	7.3	22
17	3.2	64	77	36	54	33	38	228	57	8.0	6.7	16
18	2.9	40	78	33	47	30	40	132	47	7.2	7.6	13
19	3.2	30	48	31	44	34	38	68	36	6.9	30	11
20	3.1	27	32	30	43	45	37	45	30	6.7	29	10
21	4.4	28	28	29	40	43	35	46	41	6.2	21	9.8
22	13	23	44	26	44	37	34	49	108	5.6	17	9.2
23	13	20	54	32	63	38	32	46	41	5.5	15	8.6
24	12	18	48	31	62	37	32	37	32	5.0	13	8.5
25	10	16	36	33	49	34	30	32	27	4.5	11	7.6
26	8.6	16	30	31	43	35	29	28	23	4.8	10	8.0
27	7.6	16	24	27	51	41	29	24	21	7.4	14	9.4
28	6.6	15	21	26	49	51	29	26	18	7.2	89	9.6
29	5.9	15	18	25	------	53	30	61	17	9.0	88	9.1
30	5.7	14	16	24	------	47	29	254	17	41	53	8.8
31	8.2	------	16	29	------	40	------	564	------	23	30	------
TOTAL	116.63	1,029.3	827	1,186	1,787	1,297	1,489	2,347	1,723	381.7	694.0	669.7
MEAN	3.76	34.3	26.7	38.3	63.8	41.8	49.6	75.7	57.4	12.3	22.4	22.3
MAX	13	117	78	153	193	75	190	564	290	41	89	191
MIN	.26	7.4	11	24	16	30	29	24	17	4.5	6.7	6.4
CFSM	.08	.75	.59	.84	1.40	.92	1.09	1.66	1.26	.27	.49	.49
IN.	.10	.84	.67	.97	1.46	1.06	1.21	1.91	1.41	.31	.57	.55

CAL YR 1970 TOTAL 11,275.25 MEAN 30.9 MAX 170 MIN .22 CFSM .68 IN 9.20
WTR YR 1971 TOTAL 13,547.33 MEAN 37.1 MAX 564 MIN .26 CFSM .81 IN 11.05

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-17	1030	5.21	250	9-13	0030	5.22	250
5-31	0600	6.26	645				

01668800 HOSKINS CREEK NEAR TAPPAHANNOCK, VA.

LOCATION (revised).--Lat 37°55'38", long 76°57'16", Essex County, at bridge on State Highway 717, 0.4 mile upstream from Criddlin Swamp, 2.9 miles downstream from site of Hutchinson Mill Pond (destroyed by flood of August 1969), and 5.0 miles west of Tappahannock.

DRAINAGE AREA.--15.5 sq mi.

PERIOD OF RECORD.--October 1964 to August 1969, June 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 34.30 ft above mean sea level.

AVERAGE DISCHARGE.--6 years, 12.1 cfs (10.60 inches per year).

EXTREMES.--Current year: Maximum discharge, 155 cfs Aug. 4 (gage height, 4.14 ft), from rating curve extended above 100 cfs on basis of velocity-area study; maximum gage height, 4.15 ft May 16; minimum discharge, 2.5 cfs Oct. 7.

Period of record: Maximum discharge, 1,380 cfs Aug. 20, 1969 (gage height, 10.23 ft), from rating curve extended above 100 cfs on basis of velocity-area study; minimum, 0.20 cfs Sept. 12, 13, 1966 (gage height, 0.80 ft).

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	7.8	8.6	17	11	18	14	13	60	7.5	16	8.0
2	3.2	6.9	8.2	16	9.0	17	13	13	30	6.9	12	6.9
3	3.1	6.5	8.0	13	7.8	26	16	13	27	7.8	8.9	6.3
4	3.0	9.3	8.0	12	9.1	37	14	13	20	6.3	55	5.9
5	2.8	20	7.5	39	13	29	12	12	20	5.3	105	5.7
6	2.8	14	7.1	39	18	23	29	12	17	9.8	38	4.9
7	2.8	11	6.7	23	21	21	65	13	14	28	20	4.4
8	2.6	8.9	7.3	16	54	19	38	31	13	12	12	4.2
9	3.0	6.5	7.6	14	46	17	25	28	12	7.5	9.1	4.1
10	3.0	7.8	7.[illegible]	13	27	17	20	17	12	6.1	7.5	3.9
11	3.4	58	7.1	13	21	17	18	12	10	5.9	7.1	4.1
12	3.7	54	9.3	13	17	16	17	9.8	9.5	12	6.5	7.5
13	3.7	31	11	12	29	15	16	16	11	11	5.5	16
14	3.9	19	9.3	14	46	14	16	17	12	8.6	4.9	13
15	4.2	42	8.2	16	32	16	14	12	12	6.9	4.6	8.4
16	8.6	37	12	15	24	19	14	86	25	6.7	4.4	6.1
17	6.5	22	36	13	21	15	14	65	23	7.5	4.4	5.1
18	4.8	15	25	11	20	14	15	31	17	5.9	10	4.2
19	4.2	12	15	10	18	17	14	19	13	5.5	21	3.9
20	3.9	12	11	8.2	19	20	13	15	11	4.8	23	3.6
21	5.7	14	11	8.2	18	16	13	20	10	4.4	16	3.9
22	11	12	18	9.5	20	14	13	18	12	4.2	10	3.7
23	8.9	10	17	12	28	16	12	14	11	4.4	8.4	3.9
24	7.5	9.8	14	11	24	14	12	11	10	4.4	6.3	4.2
25	6.3	9.1	12	12	20	13	12	10	9.5	4.4	5.3	3.7
26	5.7	9.3	10	11	17	14	12	9.1	8.2	5.5	4.9	3.6
27	5.3	9.3	9.3	9.3	24	19	12	7.5	7.5	5.1	28	4.2
28	4.9	9.5	9.3	7.8	21	22	12	9.5	6.7	3.9	75	4.2
29	4.8	9.5	8.6	7.3	------	21	13	32	6.1	5.5	40	3.7
30	5.3	8.9	8.0	10	------	16	12	68	6.9	19	19	4.1
31	8.0	------	8.0	14	------	15	------	100	------	15	11	------
TOTAL	150.0	502.1	345.8	439.3	634.9	569	520	746.9	456.4	247.8	598.8	165.4
MEAN	4.84	16.7	11.2	14.2	22.7	18.4	17.3	24.1	15.2	7.99	19.3	5.51
MAX	11	58	36	39	54	37	65	100	60	28	105	16
MIN	2.6	6.5	6.7	7.3	7.8	13	12	7.5	6.1	3.9	4.4	3.6
CFSM	.31	1.08	.72	.92	1.46	1.19	1.12	1.55	.98	.52	1.25	.36
IN.	.36	1.21	.83	1.05	1.52	1.37	1.25	1.79	1.10	.59	1.44	.40

WTR YR 1971 TOTAL 5,376.4 MEAN 14.7 MAX 105 MIN 2.6 CFSM .95 IN 12.90

PEAK DISCHARGE (BASE, 60 CFS, CORRECTED)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
11-11	1730	3.64	76	5-31	0800	4.07	108
2- 9	0100	3.43	62	8- 4	2230	4.14	155
4- 7	0500	3.56	70	8-28	0300	3.72	82
5-16	1500	4.15	118				

01669000 PISCATAWAY CREEK NEAR TAPPAHANNOCK, VA.

LOCATION.--Lat 37°52'37", long 76°54'03", Essex County, on right bank at upstream side of bridge on State Highway 691, 0.6 mile south of Henley Fork, 2.3 miles downstream from Sturgeon Swamp, and 4.2 miles southwest of Tappahannock.

DRAINAGE AREA.--28.0 sq mi.

PERIOD OF RECORD.--July 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2.50 ft above mean sea level.

AVERAGE DISCHARGE.--20 years, 29.7 cfs (14.40 inches per year).

EXTREMES.--Current year: Maximum discharge, 270 cfs Aug. 5 (gage height, 3.68 ft); maximum gage height, 3.82 ft May 17; minimum discharge, 2.0 cfs Oct. 1.

Period of record: Maximum discharge, 2,380 cfs Aug. 20, 1969 (gage height, 7.52 ft); minimum, 0.01 cfs Oct. 2, 1954 (gage height, 0.33 ft).

REMARKS.--Records poor prior to January and fair thereafter. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	14	8.2	30	20	31	22	19	93	13	22	10
2	2.2	14	8.3	27	17	28	21	18	42	15	15	9.4
3	2.7	14	8.3	23	16	49	24	19	31	17	11	8.8
4	2.8	14	7.6	22	22	104	24	19	27	15	16	8.5
5	2.7	19	9.1	50	27	58	20	18	31	12	100	7.8
6	2.8	20	8.5	68	45	42	37	17	30	11	93	7.6
7	2.9	18	9.1	40	57	40	154	17	22	16	26	7.1
8	3.1	15	7.8	29	127	37	89	45	19	19	16	6.6
9	4.4	14	8.0	25	120	33	46	44	18	13	12	6.4
10	4.5	14	10	22	52	31	37	24	18	12	10	6.4
11	4.5	26	10	19	36	31	31	18	17	14	9.1	7.2
12	4.6	28	11	17	31	30	29	15	18	24	8.6	8.8
13	5.3	21	15	15	94	29	28	20	18	30	7.8	13
14	5.1	16	15	17	111	30	28	29	17	17	7.4	13
15	5.1	19	14	22	67	34	26	21	17	12	7.0	10
16	5.7	19	18	23	45	46	26	140	29	10	6.6	9.3
17	7.4	15	25	19	37	37	25	167	42	10	6.6	7.6
18	7.4	12	23	18	34	27	22	53	26	12	11	7.0
19	6.4	11	23	16	31	28	21	31	18	10	24	6.9
20	6.0	11	21	15	31	36	20	25	16	9.0	25	6.6
21	6.2	12	22	13	30	33	21	28	24	8.2	17	7.1
22	8.6	11	30	17	30	29	20	30	44	7.7	12	7.1
23	9.0	11	31	20	43	31	22	22	25	7.4	9.3	7.2
24	8.2	9.3	25	21	40	34	20	18	20	7.1	8.2	7.2
25	7.6	9.1	20	22	31	29	20	16	18	7.6	7.6	6.8
26	7.4	8.6	17	22	27	29	18	15	16	8.8	7.1	6.5
27	8.6	9.0	16	19	37	31	18	13	14	9.8	20	6.6
28	8.8	8.2	16	13	40	41	19	15	13	9.0	77	6.5
29	9.3	8.2	15	13	------	38	19	59	12	9.6	40	6.5
30	10	8.0	15	19	------	29	19	127	12	32	18	6.8
31	12	------	19	27	------	24	------	167	------	34	12	------
TOTAL	183.7	428.4	485.9	723	1,298	1,129	926	1,269	747	432.2	742.3	235.2
MEAN	5.93	14.3	15.7	23.3	44.9	36.4	30.9	40.9	24.9	13.9	23.9	7.84
MAX	12	28	31	68	127	104	154	167	93	34	100	13
MIN	2.2	8.0	7.6	13	16	24	18	13	12	7.1	6.6	6.4
CFSM	.21	.51	.56	.83	1.60	1.30	1.10	1.46	.89	.50	.85	.28
IN.	.24	.57	.65	.96	1.67	1.50	1.23	1.69	.99	.57	.99	.31

CAL YR 1970 TOTAL 7,345.1 MEAN 20.1 MAX 98 MIN 1.4 CFSM .72 IN 9.76
WTR YR 1971 TOTAL 8,559.7 MEAN 23.5 MAX 100 MIN 2.2 CFSM .84 IN 11.37

PEAK DISCHARGE (BASE, 250 CFS).--AUG. 5 (1600) 270 CFS (3.68 FT).

01669500 DRAGON SWAMP NEAR CHURCH VIEW, VA.

LOCATION.--Lat 37°41'05", long 76°43'37", Middlesex County, on left bank at downstream side of bridge on State Highway 602, 0.9 mile upstream from Briery Swamp, 1.8 miles downstream from Tim Branch Swamp, 2.6 miles west of Church View, and 2.9 miles east of Dragonville.

DRAINAGE AREA.--84.9 sq mi.

PERIOD OF RECORD.--August 1943 to current year. Prior to October 1965, published as Dragon Run near Church View.

GAGE.--Water-stage recorder. Datum of gage is 34.00 ft above mean sea level. Prior to July 18, 1966, at site 400 ft downstream at same datum.

AVERAGE DISCHARGE.--28 years, 78.8 cfs (12.60 inches per year).

EXTREMES.--Current year: Maximum discharge, 256 cfs June 2 (gage height, 5.64 ft); minimum, 1.0 cfs Oct. 20, 21 (gage height, 3.74 ft).

Period of record: Maximum discharge, 3,990 cfs June 4, 1963 (gage height, 10.00 ft); no flow many days in 1954, 1955, 1957, 1959, and 1966.

Flood in September 1935 reached a stage of about 17 ft, from information by local residents.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	4.0	23	44	35	98	80	29	204	23	9.2	33
2	1.7	4.3	22	64	29	93	73	28	248	22	12	29
3	1.6	4.6	22	65	23	98	71	28	244	21	16	25
4	1.7	4.9	22	67	23	142	73	28	210	19	20	21
5	1.6	6.1	21	89	30	165	67	28	153	18	31	18
6	1.5	7.6	20	93	78	156	78	29	102	16	37	15
7	1.4	8.6	19	87	130	142	147	29	71	17	38	12
8	1.4	9.1	18	80	180	113	201	33	65	16	60	10
9	1.3	9.0	18	71	180	93	234	39	55	15	67	9.0
10	1.4	9.5	18	60	162	80	201	40	52	14	54	8.2
11	1.4	17	18	59	150	65	150	44	48	17	42	8.5
12	1.3	37	18	55	125	59	120	43	42	32	32	12
13	1.2	62	20	48	113	56	100	45	39	34	21	19
14	1.2	92	21	47	133	52	87	54	38	36	16	22
15	1.1	96	22	51	125	51	76	56	39	45	13	20
16	1.2	91	26	52	130	52	65	87	54	37	11	17
17	1.2	78	54	47	122	55	64	128	62	31	9.5	15
18	1.1	67	74	47	102	60	59	153	60	26	9.5	12
19	1.1	59	74	42	82	64	55	162	34	21	10	10
20	1.1	54	69	34	69	67	54	165	67	18	14	9.2
21	1.3	52	64	29	60	65	52	139	43	16	13	8.8
22	2.4	47	65	29	60	60	48	100	44	14	12	9.5
23	2.5	42	67	36	87	60	47	69	44	12	11	8.2
24	2.6	36	60	40	104	60	44	55	50	10	9.5	8.0
25	2.6	34	56	42	96	57	39	46	54	9.0	8.8	7.8
26	2.6	32	52	42	87	56	36	40	51	8.5	7.8	7.2
27	2.7	29	46	39	91	69	34	36	42	8.0	10	7.2
28	2.7	27	40	30	96	78	34	35	34	6.8	21	7.0
29	2.8	26	34	25	------	80	32	47	28	6.5	30	6.8
30	3.2	24	30	26	------	87	30	80	26	6.5	33	6.8
31	3.7	------	27	33	------	87	------	147	------	7.8	33	------
TOTAL	56.4	1,069.7	1,140	1,573	2,702	2,520	2,455	2,042	2,303	583.1	711.3	401.2
MEAN	1.82	35.7	36.8	50.7	96.5	81.3	81.8	65.9	76.8	18.8	22.9	13.4
MAX	3.7	96	74	93	180	165	234	165	248	45	67	33
MIN	1.1	4.0	18	25	23	51	30	28	26	6.5	7.8	6.8
CFSM	.02	.42	.43	.60	1.14	.96	.96	.78	.90	.22	.27	.16
IN.	.02	.47	.50	.69	1.18	1.10	1.08	.89	1.01	.26	.31	.18

CAL YR 1970 TOTAL 16,199.2 MEAN 44.4 MAX 218 MIN 1.1 CFSM .52 IN 7.10
WTR YR 1971 TOTAL 17,556.7 MEAN 48.1 MAX 248 MIN 1.1 CFSM .57 IN 7.69

PEAK DISCHARGE (BASE, 600 CFS).--NO PEAK ABOVE BASE.

01670000 BEAVERDAM SWAMP NEAR ARK, VA.

LOCATION (revised).--Lat 37°28'14", long 76°33'48", Gloucester County, on right bank 300 ft downstream from bridge on State Highway 606, 1.4 miles upstream from Beech Swamp, 2.3 miles north of Ark, and 4.3 miles northwest of Gloucester.

DRAINAGE AREA.--6.63 sq mi (revised).

PERIOD OF RECORD.--October 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 36.43 ft above mean sea level.

AVERAGE DISCHARGE.--22 years, 6.63 cfs (13.58 inches per year).

EXTREMES.--Current year: Maximum discharge, 59 cfs Feb. 8 (gage height, 3.02 ft); maximum gage height, 3.06 ft Apr. 6; minimum discharge, 0.25 cfs Oct. 15, 16.

Period of record: Maximum discharge, 570 cfs Sept. 12, 1960 (gage height, 5.88 ft), from rating curve extended above 130 cfs; no flow July 30 to Aug. 2, 1953.

REMARKS.--Records fair prior to April and poor thereafter. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1502: 1950, 1951-52(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.2	2.0	12	3.9	4.5	8.2	6.1	8.3	2.9	4.6	1.8
2	1.0	1.1	2.1	8.2	2.3	4.0	8.3	6.3	6.3	3.3	3.4	1.6
3	.80	1.3	2.0	5.2	2.0	10	12	7.0	4.9	2.8	1.8	1.4
4	.80	2.1	2.1	4.7	2.7	25	10	7.3	4.5	2.5	1.4	1.3
5	.60	4.2	2.0	6.3	10	12	8.3	6.7	4.3	2.4	5.6	1.2
6	.50	4.0	2.0	6.6	12	7.8	26	6.4	4.1	2.5	5.4	1.1
7	.40	3.2	1.9	4.0	14	6.6	31	5.9	5.1	3.6	3.3	1.0
8	.50	2.7	1.9	3.1	44	5.7	14	7.0	7.0	2.3	1.3	.98
9	.50	2.5	2.0	3.1	20	4.9	9.4	6.4	5.8	2.6	1.1	.90
10	.40	3.4	2.1	3.9	10	4.5	7.6	6.0	4.5	3.0	1.2	.96
11	.32	16	2.1	4.0	7.7	4.6	7.3	5.6	3.8	3.8	1.4	1.8
12	.40	11	2.4	4.6	7.0	4.5	8.0	5.7	4.3	12	1.7	6.0
13	.35	5.3	2.7	4.6	16	4.4	9.1	6.4	7.6	6.3	1.3	16
14	.30	3.4	2.6	5.2	23	4.2	10	8.9	6.6	3.2	1.1	6.6
15	.28	8.2	2.2	5.6	11	5.2	11	7.4	6.6	2.4	1.0	3.2
16	.60	8.2	4.7	4.1	7.4	8.3	9.3	12	8.2	2.2	1.0	2.5
17	.60	4.6	24	3.5	5.7	5.4	8.8	9.1	6.7	2.1	1.1	1.9
18	.60	3.5	9.7	3.4	5.2	4.1	9.0	6.7	4.5	2.0	4.0	1.6
19	.50	3.1	4.7	2.7	4.4	4.7	8.3	6.0	3.3	1.9	4.9	1.5
20	.50	3.1	3.8	2.0	4.4	9.5	7.6	6.1	3.2	2.1	3.1	1.4
21	1.1	3.4	4.5	1.9	4.4	5.9	7.0	6.6	3.2	2.0	1.1	1.3
22	4.3	3.5	9.1	3.0	5.2	4.5	6.7	6.8	12	1.9	.80	1.3
23	3.3	2.7	6.1	4.2	9.2	5.7	6.3	5.6	9.7	1.9	.78	1.2
24	1.3	2.4	4.4	3.6	6.1	5.4	6.0	4.9	6.4	1.8	.62	1.2
25	.70	2.1	3.4	5.0	4.6	4.1	5.7	4.1	4.7	1.8	.68	1.2
26	.60	2.3	3.2	4.4	4.0	6.8	6.0	4.2	3.8	1.8	.76	1.2
27	.70	2.1	2.8	3.2	9.5	10	6.1	4.1	3.5	1.8	3.9	1.3
28	.75	2.0	2.4	2.2	7.3	14	6.1	4.9	3.3	1.9	18	1.3
29	.90	2.2	2.1	2.0	------	15	6.3	7.0	3.2	2.1	8.4	1.2
30	1.0	2.0	1.9	3.3	------	12	6.3	9.9	2.8	2.6	5.4	1.4
31	1.1	------	2.6	5.2	------	9.7	------	23	------	3.5	2.2	------
TOTAL	27.00	116.8	121.5	134.8	263.0	233.0	285.7	220.3	162.2	89.0	92.34	67.34
MEAN	.87	3.89	3.92	4.35	9.39	7.52	9.52	7.11	5.41	2.87	2.98	2.24
MAX	4.3	16	24	12	44	25	31	23	12	12	18	16
MIN	.28	1.1	1.9	1.9	2.0	4.0	5.7	4.1	2.8	1.8	.62	.90
CFSM	.13	.59	.59	.66	1.42	1.13	1.44	1.07	.82	.43	.45	.34
IN.	.15	.66	.68	.76	1.48	1.31	1.60	1.24	.91	.50	.52	.38

CAL YR 1970 TOTAL 1,510.03 MEAN 4.14 MAX 28 MIN .18 CFSM .62 IN 8.47
WTR YR 1971 TOTAL 1,812.98 MEAN 4.97 MAX 44 MIN .28 CFSM .75 IN 10.17

PEAK DISCHARGE (BASE, 65 CFS).--NO PEAK ABOVE BASE.

01671000 NORTH ANNA RIVER NEAR DOSWELL, VA.

LOCATION.--Lat 37°53'15", long 77°29'15", Caroline County, on left bank 1.5 miles upstream from bridge on U.S. Highway 1, 2.5 miles northwest of Doswell, and 4.4 miles upstream from Bull Run.

DRAINAGE AREA.--441 sq mi.

PERIOD OF RECORD.--March 1926 to current year. Published as "near Hewlett", 1926-28. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 55.66 ft above mean sea level. Mar. 23, 1926, to Aug. 11, 1928, nonrecording gage at site 10.2 miles upstream at different datum. Mar. 17, 1929, to Nov. 7, 1930, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--45 years, 372 cfs (11.46 inches per year).

EXTREMES.--Current year: Maximum discharge, 7,950 cfs June 1 (gage height, 17.45 ft); minimum, 13 cfs Oct. 13, 14 (gage height, 0.31 ft).

Period of record: Maximum discharge, 24,800 cfs Aug. 21, 1969 (gage height, 32.60 ft); maximum gage height, 33.7 ft Aug. 12, 1928, from floodmarks, present site and datum; minimum discharge, 1.0 cfs Sept. 30, Oct. 1, 2, 1932.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1171: 1943. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	125	123	147	190	517	429	220	7,100	218	352	88
2	15	245	121	184	140	458	394	211	1,690	226	295	73
3	16	113	114	272	150	627	418	218	998	286	178	66
4	15	91	117	284	180	2,020	507	231	666	319	175	62
5	16	622	111	981	218	1,820	446	225	713	245	294	58
6	17	528	104	2,260	304	949	415	208	620	197	672	54
7	18	184	99	1,300	514	728	1,430	210	507	182	331	57
8	16	131	97	734	2,290	622	2,810	255	555	181	178	59
9	15	102	93	498	3,120	534	1,630	294	630	170	127	50
10	16	87	96	403	1,600	479	919	296	531	151	103	46
11	17	211	101	379	804	449	721	236	450	135	91	66
12	15	1,210	114	379	589	424	577	201	397	169	124	757
13	13	1,370	151	381	721	379	511	430	360	281	76	673
14	13	1,060	216	413	3,300	363	475	1,980	543	251	76	462
15	17	1,630	193	631	3,070	354	447	1,210	1,350	176	69	222
16	25	1,490	179	716	999	396	419	1,510	1,400	137	63	132
17	38	617	898	527	712	380	393	2,630	1,180	123	61	92
18	41	368	910	401	590	330	366	1,340	942	116	65	76
19	34	264	470	320	526	319	347	791	673	111	71	68
20	35	237	330	250	484	710	329	531	543	108	87	68
21	38	224	275	280	462	773	299	1,550	481	130	106	68
22	56	207	356	300	443	509	290	2,900	449	143	109	65
23	75	208	1,010	318	2,540	450	282	920	583	123	85	64
24	83	177	730	371	2,220	514	269	547	459	106	73	64
25	72	158	524	387	944	436	261	400	381	98	65	62
26	54	143	387	389	664	388	253	404	327	93	58	59
27	41	133	315	398	631	409	241	339	287	90	721	57
28	36	130	259	193	661	578	231	293	264	89	738	60
29	33	129	207	250	------	714	230	541	236	84	667	63
30	35	124	171	280	------	651	232	2,520	217	127	273	62
31	51	------	160	300	------	509	------	5,890	------	319	128	------
TOTAL	981	12,320	9,031	14,926	29,066	18,789	16,571	29,531	25,532	5,192	6,511	3,853
MEAN	31.6	411	291	481	1,038	606	552	953	851	167	210	128
MAX	83	1,630	1,010	2,260	3,300	2,020	2,810	5,890	7,100	319	738	757
MIN	13	87	93	147	140	319	230	201	217	84	58	46
CFSM	.07	.93	.66	1.09	2.35	1.37	1.25	2.16	1.93	.38	.48	.29
IN.	.08	1.04	.76	1.26	2.45	1.58	1.40	2.49	2.15	.44	.55	.33

CAL YR 1970 TOTAL 121,664.4 MEAN 333 MAX 3,260 MIN 5.6 CFSM .76 IN 10.26
WTR YR 1971 TOTAL 172,303.0 MEAN 472 MAX 7,100 MIN 13 CFSM 1.07 IN 14.53

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 9	1200	10.78	3,370	5-22	0600	11.87	3,910
2-15	0430	12.68	4,390	6- 1	0630	17.45	7,950
2-23	1830	10.58	3,280				

01671100 LITTLE RIVER NEAR DOSWELL, VA.

LOCATION.--Lat 37°52'21", long 77°30'48", Hanover County, on left bank at downstream side of bridge on State Highway 685, 0.8 mile southwest of Verdon, 2.9 miles west of Doswell, and 9.6 miles upstream from mouth.

DRAINAGE AREA.--107 sq mi.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 132.30 ft above mean sea level (levels by La Prade Bros., Engineers).

AVERAGE DISCHARGE.--10 years, 79.0 cfs (10.03 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,780 cfs May 31 (gage height, 5.82 ft); minimum, 1.1 cfs Oct. 7-12; minimum gage height, 1.58 ft Oct. 8.
Period of record: Maximum discharge, 12,000 cfs Aug. 21, 1969 (gage height, 11.09 ft), from rating curve extended above 2,500 cfs on basis of contracted-opening measurement of peak flow; minimum, 0.10 cfs Sept. 25, 26, 1968.

REMARKS.--Records good. Frequent quarry dewatering by the General Crushed Stone Co. above gage adds about 0.5 cfs at times.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WRD Va. 1970: 1969.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	20	29	30	65	148	95	48	1,480	34	46	32
2	1.4	23	29	36	54	124	82	47	661	34	70	26
3	1.4	19	25	40	32	162	99	47	237	31	58	24
4	1.3	20	23	45	30	346	100	45	132	30	46	21
5	1.6	67	22	198	36	417	89	43	102	30	42	16
6	1.3	110	22	625	57	286	110	42	85	29	30	17
7	1.1	91	21	666	100	194	354	42	72	29	40	18
8	1.1	43	21	250	495	139	575	78	91	26	35	17
9	1.1	27	21	125	735	108	472	78	89	26	26	15
10	1.1	20	22	90	585	97	218	62	69	30	20	16
11	1.1	53	23	82	260	91	142	52	54	26	17	19
12	1.3	126	26	81	170	89	122	46	48	31	16	410
13	1.6	218	36	84	192	91	106	56	46	29	14	644
14	1.7	188	54	92	485	95	99	172	55	32	12	150
15	1.9	300	38	105	590	95	87	264	227	30	10	83
16	2.4	448	37	130	282	112	82	342	590	26	10	54
17	2.0	286	139	110	168	128	75	570	505	23	9.6	38
18	2.1	114	200	90	126	114	76	469	310	20	12	29
19	2.8	67	130	70	110	112	74	169	165	18	17	26
20	1.9	55	78	54	100	197	72	99	104	17	22	26
21	3.2	58	58	60	97	250	70	85	82	15	23	24
22	16	50	78	66	97	188	70	91	126	14	15	24
23	14	45	104	70	249	162	69	138	97	14	17	23
24	12	38	110	71	600	155	70	85	91	12	15	24
25	8.8	36	95	80	410	140	69	64	82	12	14	21
26	6.8	35	78	84	183	132	69	54	64	12	12	20
27	5.2	34	60	86	168	142	69	47	52	10	337	23
28	2.0	30	50	50	162	186	65	46	47	12	497	22
29	4.6	30	38	45	------	221	65	138	41	12	221	20
30	2.8	30	34	60	------	214	69	651	38	19	102	20
31	13	------	31	70	------	122	------	1,560	------	30	51	------
TOTAL	120.0	2,681	1,732	3,745	6,638	5,057	3,815	5,730	5,842	713	1,860.6	1,902
MEAN	3.87	89.4	55.9	121	237	163	127	185	195	23.0	60.0	63.4
MAX	16	448	200	666	735	417	575	1,560	1,480	34	497	644
MIN	1.1	19	21	30	30	89	65	42	38	10	9.6	15
CFSM	.04	.84	.52	1.13	2.22	1.52	1.19	1.73	1.82	.22	.56	.59
IN.	.04	.93	.60	1.30	2.31	1.76	1.33	1.99	2.03	.25	.65	.66

CAL YR 1970 TOTAL 25,683.7 MEAN 70.4 MAX 801 MIN 1.1 CFSM .66 IN 8.93
WTR YR 1971 TOTAL 39,835.6 MEAN 109 MAX 1,560 MIN 1.1 CFSM 1.02 IN 13.85

PEAK DISCHARGE (BASE, 650 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1- 7	0300	4.55	762	5-31	2100	5.82	1,780
2- 9	1400	4.60	790	8-27	1500	4.50	735
2-15	0500	4.35	655	9-13	0200	4.91	980
2-24	1900	4.49	735				

01671500 BUNCH CREEK NEAR BOSWELLS TAVERN, VA.

LOCATION (revised).--Lat 38°01'54", long 78°11'30", Louisa County, on right bank at upstream side of bridge on U.S. Highway 15, 2.7 miles south of Boswells Tavern, 4.8 miles north of Zion Crossroads, 5.0 miles upstream from mouth, and 10 miles west of Louisa.

DRAINAGE AREA.--4.37 sq mi.

PERIOD OF RECORD.--October 1948 to current year. Prior to October 1967, published as Hudson Creek near Boswells Tavern.

GAGE.--Water-stage recorder. Datum of gage is 377.14 ft above mean sea level.

AVERAGE DISCHARGE.--23 years, 4.22 cfs (13.11 inches per year).

EXTREMES.--Current year: Maximum discharge, 326 cfs May 30 (gage height, 4.55 ft); no flow October 1-16.
Period of record: Maximum discharge, 2,750 cfs Aug. 20, 1969 (gage height, 10.64 ft), from rating curve extended above 340 cfs on basis of contracted-opening measurement of peak flow; no flow at times in most years.

REMARKS.--Records good except those prior to Apr. 24, which are poor. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.60	1.1	1.2	1.5	3.3	3.5	1.9	8.9	1.2	1.2	.48
2	0	.80	1.0	1.7	1.2	3.3	3.1	1.9	5.4	1.4	1.1	.48
3	0	1.5	1.0	1.9	1.1	27	3.3	2.1	4.6	1.1	.80	.48
4	0	.80	.95	2.5	1.3	30	3.9	1.8	4.5	.74	5.7	.42
5	0	5.0	.90	25	1.5	7.0	3.0	1.6	10	.67	5.4	.48
6	0	4.0	.86	17	5.0	5.0	10	1.8	4.0	.67	1.2	.42
7	0	2.0	.84	10	15	4.0	46	2.2	3.4	.99	.74	.33
8	0	1.3	.82	6.0	32	3.3	12	5.6	3.5	.74	.60	.29
9	0	.80	.80	4.0	16	3.0	7.0	2.4	2.4	.60	.42	.25
10	0	.70	.82	3.3	9.0	2.7	5.0	1.8	2.0	.53	.37	.22
11	0	1.5	.85	2.9	5.0	2.6	4.5	1.4	1.8	.89	.42	1.1
12	0	4.0	.95	2.7	4.0	2.5	3.8	1.9	2.7	2.1	.80	11
13	0	7.5	1.3	2.6	72	2.4	3.4	98	3.4	.99	.60	7.2
14	0	4.5	2.2	3.5	28	2.4	3.0	15	3.2	.74	.42	2.2
15	0	9.0	1.8	5.0	8.0	2.3	2.5	7.0	5.0	.53	.33	1.2
16	0	15	1.4	7.0	5.0	3.0	2.2	44	10	.60	.29	.67
17	.20	6.0	4.5	4.0	4.0	3.8	2.1	11	5.4	.53	.25	.48
18	.15	3.0	10	3.0	3.5	2.5	2.0	5.8	3.4	.42	.37	.48
19	.10	2.0	4.5	2.5	3.2	2.2	1.9	4.4	2.6	.48	.60	.60
20	.35	1.8	2.6	2.2	3.0	6.0	1.8	11	2.0	.53	1.1	.60
21	.55	1.7	2.0	2.0	3.0	10	1.8	20	1.8	.48	.67	.60
22	.40	1.6	3.0	2.6	3.0	4.0	1.8	7.0	6.4	.37	.53	.74
23	.60	1.5	5.0	2.5	33	3.0	1.7	4.8	2.9	.33	.48	.74
24	.45	1.3	7.5	2.4	10	2.7	1.7	4.0	2.1	.29	.33	.74
25	.40	1.2	4.5	2.6	6.0	2.6	1.7	3.8	1.7	.29	.25	.74
26	.50	1.2	3.0	2.6	4.0	2.5	1.7	3.2	1.6	.29	.22	.67
27	.38	1.1	2.2	2.5	3.7	4.0	1.6	2.7	1.3	.33	11	.89
28	.33	1.1	1.7	2.5	3.6	6.0	1.8	3.7	1.2	.33	4.0	.80
29	.30	1.0	1.4	2.0	------	9.0	1.8	45	1.2	2.2	1.2	.74
30	.28	1.3	1.1	2.3	------	6.5	1.8	171	1.2	2.9	.74	.60
31	.45	------	1.4	1.8	------	4.7	------	27	------	2.1	.53	------
TOTAL	5.44	83.90	71.99	133.8	285.6	173.5	141.4	514.8	109.6	26.36	42.66	36.64
MEAN	.18	2.79	2.32	4.32	10.2	5.60	4.71	16.6	3.65	.85	1.38	1.22
MAX	.60	15	10	25	72	30	46	171	10	2.9	11	11
MIN	0	.60	.80	1.2	1.1	2.2	1.6	1.4	1.2	.29	.22	.22
CFSM	.04	.64	.53	.99	2.33	1.28	1.08	3.80	.84	.19	.32	.28
IN.	.05	.71	.61	1.14	2.43	1.48	1.20	4.38	.93	.22	.36	.31

CAL YR 1970 TOTAL 1,137.66 MEAN 3.12 MAX 39 MIN 0 CFSM .71 IN 9.68
WTR YR 1971 TOTAL 1,625.59 MEAN 4.45 MAX 171 MIN 0 CFSM 1.02 IN 13.84

NOTE.--FRAGMENTARY OR NO GAGE-HEIGHT RECORD OCT. 1 TO APR. 23.

PEAK DISCHARGE (BASE, 160 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	1900	3.37	171	5-30	0900	4.55	326
5-13	0930	3.96	248				

01672500 SOUTH ANNA RIVER NEAR ASHLAND, VA.

LOCATION.--Lat 37°47'48", long 77°32'57", Hanover County, on right bank at downstream side of bridge on State Highway 54, 4.5 miles northwest of Ashland, and 7.6 miles upstream from Newfound River.

DRAINAGE AREA.--394 sq mi.

PERIOD OF RECORD.--October 1930 to current year.

GAGE.--Water-stage recorder. Datum of gage is 83.74 ft above mean sea level.

AVERAGE DISCHARGE.--41 years, 343 cfs (11.82 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,180 cfs June 2 (gage height, 12.63 ft); minimum, 5.5 cfs Oct. 15 (gage height, 1.05 ft).

Period of record: Maximum discharge, 17,100 cfs Aug. 23, 1969 (gage height, 24.99 ft); minimum, 0.10 cfs Sept. 12, 1966, caused by diversion above station.

Flood of Aug. 15, 1928, reached a stage of about 24 ft (discharge, about 14,500 cfs).

REMARKS.--Records good. Diversion 150 ft above station since September 1966 for town of Ashland water supply has averaged less than 400,000 gallons per day, equivalent to a mean discharge of less than 0.6 cfs at the station. Capacity of the diversion pickup is 1,000,000 gallons per day, equivalent to about 1.5 cfs. Small diurnal fluctuation at low flow in some years caused by gristmills above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).- WSP 801: 1935(M). WSP 1502: 1935, 1939. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	70	92	135	170	455	343	179	3,450	135	279	123
2	9.3	89	90	158	140	383	303	175	3,990	138	226	109
3	9.2	103	88	179	110	483	320	170	3,640	162	146	99
4	9.4	86	86	183	130	1,200	333	170	749	147	114	92
5	8.5	116	80	626	157	1,670	308	170	488	131	186	84
6	8.4	342	79	1,630	206	1,220	425	163	445	114	256	79
7	8.1	213	76	1,660	433	568	1,240	168	447	111	216	74
8	9.7	121	73	655	1,570	465	1,830	310	451	115	132	107
9	8.5	88	73	420	2,100	388	1,870	240	557	122	103	91
10	8.9	77	75	328	2,000	333	967	218	331	106	89	77
11	9.2	130	77	285	956	305	520	184	256	101	78	84
12	7.9	408	88	276	447	294	428	161	216	155	78	967
13	7.6	585	119	283	578	282	370	202	208	221	72	643
14	8.2	413	157	323	1,440	270	340	995	302	179	70	486
15	7.0	660	155	410	1,840	264	303	1,370	1,530	127	61	279
16	7.6	1,120	138	520	2,140	296	280	1,230	1,260	107	61	185
17	7.6	521	366	442	956	323	266	1,760	829	96	59	141
18	8.9	266	650	328	483	268	262	1,770	612	88	67	118
19	7.8	194	376	274	403	260	256	584	409	83	74	111
20	23	164	244	208	363	500	246	365	310	77	70	102
21	25	157	208	196	338	713	234	653	260	70	74	97
22	41	145	268	231	338	443	228	1,540	466	70	74	92
23	34	142	359	223	815	355	218	1,280	277	66	67	90
24	44	127	499	220	1,730	333	211	403	246	67	60	89
25	40	112	396	236	2,090	305	207	298	220	66	54	85
26	34	102	293	232	875	284	198	258	194	65	51	83
27	39	98	226	223	503	303	189	226	172	62	1,030	83
28	37	96	190	219	508	430	184	222	158	58	1,010	82
29	30	95	159	175	------	620	188	543	147	63	577	79
30	28	100	122	204	------	584	184	1,950	142	163	281	77
31	44	------	158	213	------	430	------	3,150	------	182	160	------
TOTAL	580.8	6,940	6,060	11,695	23,819	15,027	13,251	21,107	22,762	3,447	5,875	4,908
MEAN	18.7	231	195	377	851	485	442	681	759	111	190	164
MAX	44	1,120	650	1,660	2,140	1,670	1,870	3,150	3,990	221	1,030	967
MIN	7.0	70	73	135	110	260	184	161	142	58	51	74
CFSM	.05	.59	.49	.56	2.16	1.23	1.12	1.73	1.93	.28	.48	.42
IN.	.05	.66	.57	1.10	2.25	1.42	1.25	1.99	2.15	.33	.55	.46

CAL YR 1970 TOTAL 92,998.5 MEAN 255 MAX 2,180 MIN 7.0 CFSM .65 IN 8.78
WTR YR 1971 TOTAL 135,471.8 MEAN 371 MAX 3,990 MIN 7.0 CFSM .94 IN 12.79

PEAK DISCHARGE (BASE, 2,200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-16	2030	8.91	2,240	6-15	0530	8.88	2,220
2-25	2000	8.84	2,200	8-27	1700	9.22	2,380
6- 2	1930	12.63	4,180	9-12	1430	9.61	2,580

01673000 PAMUNKEY RIVER NEAR HANOVER, VA.

LOCATION.--Lat 37°46'03", long 77°19'57", Hanover-King William County line, near center of span on downstream side of bridge on State Highway 614, 0.3 mile upstream from Mechumps Creek, 2.0 miles east of Hanover, and 7.0 miles upstream from Millpond Creek.

DRAINAGE AREA.--1,081 sq mi.

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1302.

GAGE.--Nonrecording gage. Datum of gage is 14.72 ft above mean sea level. Since June 11, 1957, auxiliary nonrecording gage, 1.2 miles downstream from base gage.

AVERAGE DISCHARGE.--30 years, 915 cfs (11.49 inches per year).

EXTREMES.--Current year: Maximum discharge, 10,900 cfs June 2 (gage height, 22.22 ft, from graph based on gage readings); minimum observed, 21 cfs Oct. 8 (gage height, 2.44 ft).
Period of record: Maximum discharge, 40,300 cfs Aug. 23, 1969 (gage height, 31.12 ft, from floodmarks), from rating curve extended above 22,000 cfs; minimum, 12 cfs Sept. 12, 1966.
Flood in August 1928 reached a stage of 32.6 ft, from information by local residents.

REMARKS.--Records good. Occasional diurnal fluctuation at low flow caused by mill above station. Water-quality records for the current year are included in this report.

REVISIONS (WATER YEARS).--WSP 1302: 1944(M). WSP 1382: 1949. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	123	322	373	400	1,330	1,330	550	9,060	480	560	443
2	31	187	313	448	300	1,260	1,210	525	10,700	459	574	339
3	29	295	291	500	270	1,340	1,210	498	8,950	471	521	301
4	30	405	264	800	300	1,820	1,340	480	6,730	528	411	263
5	27	745	251	1,200	390	2,490	1,600	508	4,200	466	462	235
6	25	1,080	242	2,610	655	2,230	1,930	500	2,080	397	505	215
7	24	1,120	227	4,050	1,150	1,700	2,560	510	1,470	364	462	203
8	22	680	216	3,340	2,730	1,530	3,600	785	1,340	358	386	198
9	22	352	198	1,720	4,390	1,540	4,730	815	1,460	325	339	214
10	28	286	190	1,140	5,590	1,190	4,720	743	1,210	313	269	254
11	31	1,160	201	1,020	5,530	1,040	2,840	630	930	297	230	775
12	32	2,290	238	938	3,730	963	1,500	555	775	598	208	2,430
13	30	2,780	304	900	2,580	920	1,190	535	695	708	193	3,450
14	27	2,600	390	955	3,270	855	1,070	558	890	555	180	2,440
15	25	2,130	468	1,100	4,300	823	980	594	1,590	436	171	1,330
16	32	3,190	655	1,260	5,480	855	915	2,340	3,780	321	164	790
17	37	3,060	1,050	1,380	4,750	945	833	3,990	4,290	299	153	388
18	42	1,490	1,660	1,420	2,860	995	858	4,700	3,040	263	156	331
19	48	838	1,540	1,030	1,550	1,170	828	4,000	1,650	248	208	311
20	52	740	993	860	1,220	1,510	790	2,220	1,230	230	261	297
21	60	588	740	695	1,120	1,670	690	2,300	930	217	241	281
22	110	488	810	725	1,130	1,770	588	3,400	1,380	202	235	269
23	174	445	1,340	755	1,560	1,540	660	3,920	1,470	191	215	259
24	178	410	1,640	765	3,370	1,160	663	2,210	1,010	196	187	250
25	169	388	1,270	790	4,520	978	643	1,140	830	210	170	241
26	145	370	948	788	3,890	938	613	855	700	193	176	230
27	123	348	735	760	2,300	1,030	590	763	612	187	755	221
28	104	326	645	700	1,660	1,190	575	885	543	170	3,760	224
29	91	308	558	630	------	1,560	555	1,180	646	159	2,810	232
30	81	302	440	600	------	1,610	550	3,570	593	293	1,400	224
31	96	------	383	500	------	1,430	------	5,310	------	464	760	------
TOTAL	1,960	29,524	19,522	34,752	70,995	41,382	42,161	51,569	74,784	10,598	17,122	17,638
MEAN	63.2	984	630	1,121	2,536	1,335	1,405	1,664	2,493	342	552	588
MAX	178	3,190	1,660	4,050	5,590	2,490	4,730	5,310	10,700	708	3,760	3,450
MIN	22	123	190	373	270	823	550	480	543	159	153	198
CFSM	.06	.91	.58	1.04	2.35	1.24	1.30	1.54	2.31	.32	.51	.54
IN.	.07	1.02	.67	1.20	2.44	1.42	1.45	1.77	2.57	.36	.59	.61

CAL YR 1970 TOTAL 279,991 MEAN 767 MAX 5,740 MIN 22 CFSM .71 IN 9.64
WTR YR 1971 TOTAL 412,007 MEAN 1,129 MAX 10,700 MIN 22 CFSM 1.04 IN 14.18

01673500 TOTOPOTOMOY CREEK NEAR ATLEE, VA.

LOCATION.--Lat 37°40'09", long 77°22'58", Hanover County, on right bank at upstream side of bridge on U.S. Highway 301, 0.7 mile upstream from Opossum Creek, and 1.6 miles northeast of Atlee.

DRAINAGE AREA.--5.89 sq mi.

PERIOD OF RECORD.--October 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 116.33 ft above mean sea level. Prior to Aug. 9, 1954, at site 8 ft downstream at datum 0.04 ft higher.

AVERAGE DISCHARGE.--23 years, 5.31 cfs (12.24 inches per year).

EXTREMES.--Current year: Maximum discharge, 88 cfs June 15 (gage height, 4.77 ft); minimum, 0.02 cfs Oct. 6, 10.
Period of record: Maximum discharge, 748 cfs Aug. 13, 1955 (gage height, 8.62 ft); no flow Aug. 4-7, 15-18, 1963.
Flood, probably in July 1945, reached a stage of 7.5 ft, from floodmarks (discharge, 400 cfs).

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.25	.76	1.8	1.6	6.4	13	2.3	25	2.0	1.5	1.1
2	.08	.22	.66	2.1	1.1	5.5	4.5	2.2	13	1.8	1.3	.89
3	.08	.66	1.1	2.3	1.1	7.7	4.9	2.2	8.7	2.1	1.1	.76
4	.09	.51	.59	2.8	1.3	16	4.3	2.2	6.6	1.6	1.6	.66
5	.09	.89	.59	15	2.5	17	3.7	1.9	6.4	1.4	2.0	.66
6	.04	.39	.76	14	3.3	13	11	2.9	5.3	1.2	1.3	.59
7	.04	.39	1.5	6.1	9.8	8.7	30	4.3	8.6	1.2	.97	.56
8	.06	.76	1.2	4.3	36	7.0	19	7.0	22	1.0	.81	.56
9	.08	.22	.76	3.6	28	6.1	10	5.7	7.5	.81	.76	.51
10	.06	.36	.76	3.2	10	5.1	7.5	4.5	5.7	.81	.66	.56
11	.08	3.1	.89	3.0	7.0	4.1	5.5	4.1	4.7	1.3	.59	.81
12	.08	5.0	1.5	2.9	5.9	3.9	5.1	3.7	4.3	1.4	.56	10
13	.08	4.9	1.5	2.8	9.9	3.7	4.7	5.5	4.3	1.1	.56	7.4
14	.08	9.8	1.6	3.7	26	3.9	4.1	5.9	4.5	.97	.51	2.0
15	.09	11	.89	4.1	17	5.3	3.6	4.9	58	.81	.48	1.0
16	.14	5.1	4.0	3.6	10	5.7	3.4	38	25	.81	.43	.76
17	.08	3.9	12	3.1	7.7	5.5	3.3	19	17	.81	.43	.59
18	.08	1.2	4.1	2.6	6.6	4.3	3.1	10	8.0	.71	.81	.51
19	.06	.81	2.8	2.2	5.7	4.3	2.8	6.8	4.9	.66	.89	.59
20	.06	1.8	2.0	1.8	5.5	4.5	2.8	5.5	3.6	.59	.76	.48
21	.39	.71	3.4	2.0	5.1	4.1	3.1	6.1	2.8	.71	.59	.39
22	.43	.76	4.3	2.1	6.1	3.9	2.6	5.5	2.8	.66	.56	.39
23	.20	.81	3.7	2.3	8.2	3.9	2.5	4.5	2.8	.66	.56	.39
24	.08	1.6	3.3	2.2	10	3.7	2.5	3.9	2.3	.66	.43	.36
25	.06	.89	2.2	2.1	8.0	3.6	4.2	3.7	2.1	.66	.39	.32
26	.08	.97	2.5	1.8	6.8	3.7	2.5	3.4	1.8	.59	.43	.36
27	.06	1.0	2.3	1.6	6.8	4.3	2.0	3.4	1.5	.59	6.8	.66
28	.06	.56	2.1	1.5	7.3	5.1	2.1	4.5	2.2	.51	13	.39
29	.04	.56	1.9	1.4	------	5.7	2.2	14	2.9	.71	3.3	.32
30	.14	1.2	1.8	1.9	------	7.0	2.1	36	2.1	1.6	2.0	.43
31	.51	------	1.6	2.1	------	6.8	------	63	------	1.6	1.4	------
TOTAL	3.58	60.32	69.06	106.0	254.3	189.5	172.1	286.6	266.4	32.03	47.48	35.00
MEAN	.12	2.01	2.23	3.42	9.08	6.11	5.74	9.25	8.88	1.03	1.53	1.17
MAX	.51	11	12	15	36	17	30	63	58	2.1	13	10
MIN	.04	.22	.59	1.4	1.1	3.6	2.0	1.9	1.5	.51	.39	.32
CFSM	.02	.34	.38	.58	1.54	1.04	.97	1.57	1.51	.17	.26	.20
IN.	.02	.38	.44	.67	1.61	1.20	1.09	1.81	1.68	.20	.30	.22

CAL YR 1970 TOTAL 1,368.23 MEAN 3.75 MAX 26 MIN .04 CFSM .64 IN 8.64
WTR YR 1971 TOTAL 1,522.37 MEAN 4.17 MAX 63 MIN .04 CFSM .71 IN 9.61

PEAK DISCHARGE (BASE, 45 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
4- 1	1430	3.92	49	5-31	1100	4.55	78
5-16	1600	4.13	59	6-15	1030	4.77	88

01673800 PO RIVER NEAR SPOTSYLVANIA, VA.

LOCATION.--Lat 38°10'17", long 77°35'42", Spotsylvania County, on right bank at upstream side of bridge on State Highway 208, 1.6 miles north of Snell, 2.0 miles south of Spotsylvania, 4.8 miles downstream from Gladys Run, and 4.9 miles upstream from U.S. Highway 1.

DRAINAGE AREA.--77.4 sq mi.

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 183.76 ft above mean sea level. Prior to Sept. 30, 1964, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--9 years, 59.8 cfs (10.49 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,400 cfs May 31 (gage height, 11.67 ft); minimum, 0.82 cfs Oct. 9, 10 (gage height, 1.56 ft).

Period of record: Maximum discharge, 4,480 cfs Aug. 20, 1969 (gage height, 14.00 ft); minimum daily, 0.10 cfs Oct. 24-29, 1963, Sept. 6-13, 1966.

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	24	22	36	30	103	70	36	1,220	21	35	22
2	1.1	14	21	43	26	88	67	36	208	20	22	20
3	1.0	10	20	40	[illegible]	159	122	45	130	18	20	18
4	.96	31	21	47	[illegible]	522	128	42	99	17	17	17
5	.96	188	21	304	[illegible]	457	82	36	92	15	191	15
6	1.0	115	20	603	[illegible]	155	115	34	76	13	183	14
7	1.1	34	19	277	146	119	511	35	60	12	37	14
8	1.0	20	18	117	499	97	945	51	55	12	20	14
9	.82	14	18	83	816	80	332	57	63	13	15	13
10	.82	13	19	72	531	71	140	42	58	11	12	13
11	.89	76	20	66	124	68	101	34	40	14	9.8	14
12	1.0	280	26	68	104	66	86	31	33	88	9.1	48
13	1.2	164	57	72	210	62	80	242	34	70	15	132
14	1.6	101	45	86	826	60	73	381	40	25	12	49
15	1.8	291	30	120	812	60	64	196	46	17	8.8	27
16	3.5	439	40	140	170	65	60	332	70	14	7.7	19
17	4.1	99	245	91	117	60	59	804	84	12	7.1	16
18	4.1	57	227	72	96	50	64	209	58	10	7.1	14
19	4.1	42	81	62	85	62	66	96	40	11	36	14
20	4.1	37	57	52	81	149	57	72	33	13	64	18
21	6.0	43	48	43	81	127	54	184	30	19	26	26
22	7.1	47	134	43	161	80	52	244	126	14	16	19
23	11	35	298	57	579	91	48	97	81	11	13	17
24	10	29	162	58	612	107	46	67	48	9.8	11	17
25	6.0	25	101	61	175	76	45	56	36	8.4	9.8	15
26	3.9	24	72	73	123	70	42	50	29	8.0	8.4	15
27	2.8	23	55	64	135	82	40	41	25	8.0	89	17
28	2.8	24	45	50	145	145	40	39	22	7.4	294	18
29	2.2	22	40	45	------	160	43	138	20	9.8	109	17
30	2.6	22	35	40	------	115	40	810	20	31	41	15
31	11	------	32	42	------	82	------	2,100	------	52	28	------
TOTAL	101.75	2,343	2,049	3,027	6,859	3,688	3,672	6,637	2,966	604.4	1,373.8	687
MEAN	3.28	78.1	66.1	97.6	245	119	122	214	98.9	19.5	44.3	22.9
MAX	11	439	298	603	826	522	945	2,100	1,220	88	294	132
MIN	.82	10	18	36	26	50	40	31	20	7.4	7.1	13
CFSM	.04	1.01	.85	1.26	3.17	1.54	1.58	2.76	1.28	.25	.57	.30
IN.	.05	1.13	.98	1.45	3.30	1.77	1.76	3.19	1.43	.29	.66	.33

CAL YR 1970 TOTAL 22,896.49 MEAN 62.7 MAX 921 MIN .36 CFSM .81 IN 11.00
WTR YR 1971 TOTAL 34,007.95 MEAN 93.2 MAX 2,100 MIN .82 CFSM 1.20 IN 16.34

PEAK DISCHARGE (BASE, 900 CFS, REVISED)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-15	0200	9.49	1,350	5-17	1330	8.41	990
4- 8	1400	8.53	1,020	5-31	1130	11.67	2,400

01674000 MATTAPONI RIVER NEAR BOWLING GREEN, VA.

LOCATION.--Lat 38°03'42", long 77°23'10", Caroline County, on left bank, 0.1 mile upstream from bridge on State Highway 605, 2.2 miles northwest of Bowling Green, 2.4 miles upstream from South River, and 7.1 miles downstream from confluence of Matta and Poni Rivers.

DRAINAGE AREA.--257 sq mi.

PERIOD OF RECORD.--September 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 85.14 ft above mean sea level.

AVERAGE DISCHARGE.--29 years, 219 cfs (11.57 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,840 cfs June 1 (gage height, 12.66 ft); minimum, 0.90 cfs Oct. 10, 11, 13, 14 (gage height, 1.13 ft).

Period of record: Maximum discharge, 10,400 cfs Oct. 17, 1942 (gage height, 17.45 ft), from rating curve extended above 6,200 cfs; no flow at times in September and October 1954, and September 1966.

Flood in August 1928 reached a stage of 19.5 ft, based on relative difference in stage between this flood and flood of Oct. 17, 1942, at Milford 4 miles downstream (discharge, 15,000 cfs, from rating curve extended above 6,200 cfs).

REMARKS.--Records good. Some diurnal fluctuation from gristmill upstream [illegible]. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1382: 1943, 1945(M), 1948(M), 1949, 1953(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	44	65	138	132	501	325	145	3,240	71	128	123
2	1.9	41	61	142	135	424	273	137	3,210	75	125	81
3	1.7	34	65	150	115	387	298	137	1,700	80	86	59
4	1.6	34	63	158	94	531	342	154	880	61	68	55
5	1.5	129	59	324	102	820	378	141	551	56	77	47
6	1.3	227	57	594	151	1,250	367	130	342	47	150	42
7	1.2	234	54	1,450	215	940	551	129	257	80	227	39
8	1.0	163	51	1,460	511	571	940	157	234	58	155	37
9	1.0	83	50	850	910	425	1,810	147	210	45	85	53
10	.95	54	52	462	1,680	542	1,590	132	195	47	[illegible]	[illegible]
11	.95	93	54	316	1,640	290	850	155	182	38	36	40
12	.95	276	64	273	1,000	275	511	147	144	37	30	551
13	.95	430	102	249	640	257	378	142	129	127	29	501
14	.90	558	132	257	712	233	325	342	138	127	27	497
15	1.1	556	123	258	1,460	255	257	517	141	67	25	211
16	2.5	578	105	351	1,880	265	257	913	177	36	19	114
17	2.7	758	272	396	1,170	257	249	860	210	30	17	49
18	2.0	756	434	333	663	225	233	1,290	211	[illegible]	17	[illegible]
19	1.6	387	571	249	451	275	233	1,210	195	39	23	37
20	1.5	192	499	220	342	369	224	640	144	41	[illegible]	[illegible]
21	2.2	158	265	190	258	453	218	365	114	45	76	49
22	11	138	257	180	282	462	210	360	241	40	45	57
23	22	128	378	188	511	360	219	462	351	[illegible]	30	57
24	16	105	511	202	1,480	333	184	462	406	[illegible]	31	53
25	16	93	640	210	1,830	315	174	265	257	27	24	47
26	14	81	462	210	1,140	290	164	168	154	24	19	45
27	11	76	294	202	712	290	154	140	117	12	316	53
28	8.8	73	218	165	551	333	150	124	99	[illegible]	1,040	[illegible]
29	6.6	71	168	162	------	387	154	210	82	21	1,250	[illegible]
30	6.3	68	147	162	------	462	161	492	81	40	[illegible]	[illegible]
31	17	------	135	151	------	424	------	1,150	------	17	34	------
TOTAL	160.10	6,612	6,420	10,695	20,812	12,927	12,204	12,064	[illegible]	1,640	[illegible]	[illegible]
MEAN	5.16	220	207	345	743	417	407	389	483	53.2	175	110
MAX	22	758	640	1,460	1,880	1,250	1,810	1,290	3,240	128	1,250	501
MIN	.90	34	50	138	94	225	150	124	81	20	13	29
CFSM	.02	.86	.81	1.34	2.89	1.62	1.58	1.51	1.87	.21	[illegible]	[illegible]
IN.	.02	.96	.93	1.55	3.01	1.87	1.77	1.75	2.09	.24	[illegible]	[illegible]

CAL YR 1970 TOTAL 78,389.30 MEAN 215 MAX 1,820 MIN .90 CFSM .84 IN 11.35
WTR YR 1971 TOTAL 106,384.10 MEAN 291 MAX 3,240 MIN .90 CFSM 1.13 IN [illegible]

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1- 7	2000	9.50	1,730	4- 9	1930	9.92	1,930
2-11	0400	9.71	1,830	5-18	2200	9.03	1,500
2-16	1430	9.94	1,930	6- 1	2130	12.66	3,840
2-25	1100	9.93	1,930				

01674500 MATTAPONI RIVER NEAR BEULAHVILLE, VA.

LOCATION.--Lat 37°53'18", long 77°09'48", King William County, on right bank 0.4 mile upstream from bridge on State Highway 628, 2.4 miles north of Beulahville, and 2.7 miles downstream from Maracossic Creek.

DRAINAGE AREA.--601 sq mi.

PERIOD OF RECORD.--September 1941 to current year.

GAGE.--Water-stage recorder. Datum of gage is 12.43 ft above mean sea level (levels by Virginia Department of Highways). Prior to Oct. 14, 1942, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--30 years, 549 cfs (12.41 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,580 cfs June 5 (gage height, 15.45 ft); minimum, 17 cfs Oct. 10 (gage height, 1.71 ft).

Period of record: Maximum discharge, 12,300 cfs Aug. 23, 1969 (gage height, 24.04 ft, from floodmarks); minimum, 5.9 cfs Sept. 14, 1966 (gage height, 0.94 ft).

REMARKS.--Records good. Diurnal fluctuation at times during low flow caused by gristmill on Po River. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	109	250	402	380	2,110	908	386	1,810	235	233	2,000
2	26	123	243	421	300	1,750	816	379	1,970	237	248	1,500
3	25	127	234	453	250	1,390	729	363	2,260	252	273	479
4	23	131	231	461	270	1,240	730	360	3,110	258	256	297
5	22	202	225	638	310	1,220	782	364	3,460	232	268	251
6	20	291	218	1,030	400	1,260	828	366	2,860	197	368	222
7	20	417	205	1,310	530	1,330	1,070	359	2,110	183	383	196
8	19	410	197	1,440	895	1,440	1,290	498	1,370	173	334	177
9	18	350	192	1,520	1,290	1,570	1,410	663	816	180	308	163
10	18	263	192	1,680	1,520	1,540	1,490	628	626	169	219	150
11	20	318	194	1,840	1,640	1,180	1,660	524	521	157	154	154
12	25	524	205	1,710	1,770	808	1,950	434	457	251	131	394
13	25	768	272	1,180	2,000	704	2,060	400	417	292	129	890
14	25	911	345	802	2,250	659	1,780	455	391	310	114	1,310
15	23	1,070	372	778	2,220	633	1,190	609	392	281	97	1,580
16	25	1,290	366	823	1,950	628	773	967	468	231	85	1,610
17	37	1,360	572	831	1,870	662	668	1,440	585	179	82	1,020
18	42	1,330	763	820	1,990	675	640	1,660	627	147	82	426
19	58	1,280	872	740	2,190	631	618	1,700	554	129	106	324
20	51	1,240	916	660	2,110	704	596	1,710	461	118	123	284
21	46	[illegible]	924	600	1,730	829	564	1,770	383	111	138	264
22	74	39	883	520	1,240	935	537	1,770	339	124	156	249
23	114	438	761	565	1,020	970	509	1,420	431	114	170	239
24	150	383	794	564	1,080	939	504	917	606	101	136	238
25	116	333	851	572	1,210	833	472	821	626	99	114	226
26	90	303	903	571	1,350	764	439	705	577	93	95	211
27	73	283	937	550	1,740	760	422	497	402	95	117	205
28	67	273	803	500	2,150	810	409	417	308	93	588	216
29	63	266	562	450	------	889	406	552	269	87	1,190	222
30	57	259	426	420	------	941	397	900	246	114	1,700	210
31	73	------	405	400	------	935	------	1,420	------	179	2,040	------
TOTAL	1,475	16,549	15,316	25,251	37,735	31,739	26,647	25,454	29,452	5,421	10,437	15,707
MEAN	47.6	552	494	815	1,348	1,024	888	821	982	175	337	524
MAX	150	1,360	937	1,840	2,250	2,110	2,060	1,770	3,460	310	2,040	2,000
MIN	18	109	192	400	250	628	397	359	246	87	82	150
CFSM	.08	.92	.82	1.36	2.24	1.70	1.48	1.37	1.63	.29	.56	.87
IN.	.09	1.03	.95	1.56	2.34	1.96	1.65	1.58	1.82	.34	.65	.97

CAL YR 1970 TOTAL 191,922 MEAN 526 MAX 2,190 MIN 18 CFSM .88 IN 11.88
WTR YR 1971 TOTAL 241,185 MEAN 661 MAX 3,460 MIN 18 CFSM 1.10 IN 14.93

JAMES RIVER BASIN

02011500 BACK CREEK NEAR MOUNTAIN GROVE, VA.

LOCATION (revised).--Lat 38°04'10", long 79°53'50", Bath County, on left bank 0.3 mile downstream from Cummings Run, 0.8 mile downstream from bridge on State Highway 39, and 2.1 miles south of Mountain Grove.

DRAINAGE AREA.--134 sq mi.

PERIOD OF RECORD.--October 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,701.45 ft above mean sea level.

AVERAGE DISCHARGE.--20 years, 166 cfs (16.82 inches per year).

EXTREMES.--Current year: Maximum discharge, 7,790 cfs Feb. 13 (gage height, 9.02 ft), from rating curve extended as explained below; minimum, 5.3 cfs Oct. 8, 9, 10 (gage height, 2.00 ft).

Period of record: Maximum discharge, 12,700 cfs Mar. 7, 1967 (gage height, 10.77 ft), from rating curve extended above 4,000 cfs on basis of three slope-area measurements at gage heights 7.39, 9.05, and 9.35 ft; minimum, 1.5 cfs Aug. 18, 1967; minimum gage height, 1.67 ft Oct. 14, 1951.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	202	273	90	140	455	230	56	698	84	97	11
2	7.4	122	222	92	129	382	202	56	427	73	128	11
3	6.7	299	178	103	120	496	178	61	312	60	99	11
4	6.4	331	154	160	128	691	157	60	226	50	105	10
5	6.0	316	125	1,460	368	496	139	53	210	45	92	10
6	6.0	484	105	935	560	432	136	56	230	42	75	9.7
7	5.6	508	92	538	388	610	166	61	202	46	63	9.3
8	5.6	404	79	361	303	650	210	130	247	40	50	11
9	5.3	282	77	277	290	467	260	218	214	38	43	8.8
10	5.6	194	73	226	198	366	269	198	163	35	36	8.8
11	7.0	341	66	181	175	299	247	165	130	36	33	11
12	6.4	455	88	163	163	247	218	148	112	40	35	34
13	6.7	570	206	157	2,950	234	187	360	101	33	32	163
14	7.0	394	198	230	1,810	273	166	740	90	31	28	110
15	7.4	277	172	564	704	312	148	478	80	32	25	86
16	7.0	194	148	484	455	341	130	538	160	28	23	61
17	6.7	154	148	388	372	290	118	558	145	26	21	77
18	6.7	125	133	299	357	239	108	421	110	25	22	75
19	6.7	105	125	230	549	226	97	312	103	26	23	63
20	7.8	99	122	187	1,480	234	88	247	190	30	20	145
21	18	125	233	172	1,410	198	84	158	181	29	18	206
22	48	130	1,740	136	1,480	206	82	163	133	26	19	142
23	30	125	1,550	145	1,740	269	79	136	133	23	19	103
24	22	105	677	136	879	269	73	118	184	21	17	82
25	17	90	455	120	558	234	68	108	130	20	15	64
26	14	84	341	137	432	218	66	94	101	19	13	58
27	12	77	252	121	514	187	61	84	84	19	13	63
28	12	70	190	110	577	218	66	80	75	19	17	63
29	12	63	151	110	------	277	61	84	105	17	16	112
30	44	142	119	165	------	316	58	1,860	105	19	13	88
31	310	------	102	170	------	277	------	1,540	------	70	12	------
TOTAL	671.1	6,867	8,594	8,647	15,289	10,409	4,152	9,385	5,381	1,102	1,222	1,906.6
MEAN	21.6	229	277	279	689	336	138	303	179	35.5	39.4	63.6
MAX	310	570	1,740	1,460	2,950	691	269	1,860	698	84	128	206
MIN	5.3	63	66	90	120	187	58	53	75	17	12	8.8
CFSM	.16	1.71	2.07	2.08	5.14	2.51	1.03	2.26	1.34	.26	.29	.47
IN.	.19	1.91	2.39	2.40	5.35	2.89	1.15	2.61	1.49	.31	.34	.53

CAL YR 1970 TOTAL 60,152.1 MEAN 165 MAX 1,740 MIN 5.3 CFSM 1.23 IN 16.70
WTR YR 1971 TOTAL 77,625.7 MEAN 213 MAX 2,950 MIN 5.3 CFSM 1.59 IN 21.55

PEAK DISCHARGE (BASE, 1,400 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-22	1630	6.27	2,760	2-20	2100	5.61	2,010
1- 5	1100	5.37	1,760	2-22	2300	5.89	2,340
2-13	1800	9.02	7,790	5-30	1730	6.75	3,430

02012500 JACKSON RIVER AT FALLING SPRING, VA.

LOCATION.--Lat 37°52'36", long 79°58'39", Alleghany County, on right bank 20 ft upstream from Smith Bridge, 0.6 mile south of town of Falling Spring, 1.6 miles downstream from Falling Spring Creek, and 5.5 miles north of Covington.

DRAINAGE AREA.--411 sq mi.

PERIOD OF RECORD.--April 1925 to current year. Prior to October 1934, published as "at Barber."

GAGE.--Water-stage recorder. Datum of gage is 1,333.49 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 26, 1934, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--46 years, 472 cfs (15.60 inches per year).

EXTREMES.--Current year: Maximum discharge, 13,400 cfs Feb. 13 (gage height, 12.05 ft); minimum, 65 cfs Oct. 10, 11, 17 (gage height, 2.90 ft).

Period of record: Maximum discharge, 24,700 cfs Mar. 17, 1936 (gage height, 14.74 ft), from rating curve extended above 17,000 cfs on basis of records for other stations in James River basin; minimum, 36 cfs Oct. 12, 1946 (gage height, 2.65 ft), due to regulation from unknown source; minimum daily, 52 cfs Sept. 8, 1966.

Flood of March 1913 reached a stage of about 20 ft (discharge, about 50,000 cfs).

REMARKS.--Records good. Water-quality records for the current year are included in this report.

REVISIONS (WATER YEARS).--WSP 952: 1927, 1928(M), 1929-30, 1932-40. WSP 1303: 1926(M), 1930-34(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	790	502	339	481	1,090	535	224	2,010	298	285	100
2	73	500	456	374	360	956	493	217	1,300	268	341	95
3	72	703	402	367	330	1,380	467	227	1,010	236	286	94
4	69	897	366	339	363	1,880	430	229	771	212	284	93
5	69	848	336	1,930	858	1,300	399	214	651	194	279	91
6	69	1,160	299	2,060	1,610	1,100	396	217	690	194	251	90
7	69	983	272	1,310	962	1,250	524	235	590	198	224	90
8	69	810	238	940	911	1,400	782	368	618	188	196	89
9	68	629	231	751	842	1,110	891	507	582	170	174	90
10	66	500	222	629	578	932	812	464	492	172	159	87
11	68	741	215	539	503	815	697	413	426	188	150	102
12	71	1,020	225	494	510	698	621	386	386	183	148	247
13	71	1,300	394	500	6,080	631	568	656	366	172	153	653
14	72	974	422	825	5,020	630	522	1,240	338	155	140	360
15	71	723	381	1,460	1,770	662	474	982	317	149	130	269
16	69	566	348	1,180	1,220	705	440	1,120	373	150	123	217
17	68	463	354	952	998	653	416	1,220	428	140	115	187
18	69	402	366	791	963	577	393	977	364	134	129	226
19	69	358	349	620	1,160	552	364	773	325	136	139	208
20	75	328	339	519	2,230	614	342	635	354	135	133	562
21	95	372	438	463	2,840	556	329	547	419	143	122	663
22	151	376	2,300	436	2,420	525	322	471	363	133	123	479
23	149	361	2,900	450	3,880	560	310	418	359	126	123	381
24	108	337	1,740	468	2,230	578	297	377	505	121	118	328
25	93	293	1,180	413	1,530	532	282	353	455	117	111	278
26	86	275	920	471	1,200	518	265	330	365	122	108	243
27	77	260	702	505	1,180	486	250	297	320	119	110	246
28	74	243	572	449	1,270	529	267	289	294	114	109	232
29	76	228	470	421	------	579	253	294	318	112	111	308
30	123	246	413	783	------	630	235	3,880	332	115	106	353
31	775	------	386	724	------	596	------	4,850	------	188	102	------
TOTAL	3,209	17,686	18,738	22,502	44,299	25,024	13,380	23,410	16,117	5,087	5,086	7,461
MEAN	104	590	604	726	1,582	807	446	755	537	164	164	249
MAX	775	1,300	2,900	2,060	6,080	1,880	891	4,850	2,010	298	341	663
MIN	66	228	215	339	330	486	235	214	294	112	102	87
CFSM	.25	1.44	1.47	1.77	3.85	1.96	1.09	1.84	1.31	.40	.40	.61
IN.	.29	1.60	1.70	2.04	4.01	2.26	1.21	2.12	1.46	.46	.46	.68

CAL YR 1970 TOTAL 153,313 MEAN 420 MAX 3,690 MIN 66 CFSM 1.02 IN 13.88
WTR YR 1971 TOTAL 201,999 MEAN 553 MAX 6,080 MIN 66 CFSM 1.35 IN 18.28

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-22	2300	8.61	4,140	2-23	0430	8.84	4,650
2-13	2200	12.05	13,400	5-30	2400	10.15	7,790

02013000 DUNLAP CREEK NEAR COVINGTON, VA.

LOCATION.--Lat 37°48'10", long 80°02'50", Alleghany County, on right bank 20 ft downstream from bridge on U.S. Highway 60, 2.2 miles downstream from Ogle Creek, and 3.0 miles west of Covington.

DRAINAGE AREA.--164 sq mi.

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Datum of gage is 1,294.70 ft above mean sea level. Prior to Dec. 8, 1949, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--43 years, 155 cfs (12.83 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,490 cfs Feb. 13 (gage height, 8.77 ft), from rating curve extended as explained below; minimum, 8.0 cfs June 19 (gage height, 1.30 ft); minimum daily, 11 cfs Oct. 5, 6.

Period of record: Maximum discharge, 10,300 cfs Aug. 20, 1969 (gage height, 13.13 ft), from rating curve extended above 4,500 cfs on basis of contracted-opening measurement of peak flow; minimum, 2.0 cfs July 4, 1970; minimum daily, 7.0 cfs Sept. 9, 1966; minimum gage height, 0.69 ft June 6, July 14, 1969.

Flood of March 1913 reached a stage of 18 ft, from information by local residents.

REMARKS.--Records good. Occasional diurnal fluctuation caused by dam 7.9 miles above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 972: 1929-30, 1932-34, 1942. WSP 1303: 1929-3[illegible](M), 1937-38(M), 1941-48(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	89	35	68	110	227	158	80	795	47	62	19
2	13	65	34	91	80	224	144	78	415	47	95	19
3	13	89	32	75	75	998	131	81	280	44	93	19
4	12	118	35	60	95	1,400	117	81	210	40	101	19
5	11	190	37	990	444	654	107	76	164	37	117	18
6	11	232	36	598	1,050	442	117	117	136	35	112	17
7	12	162	36	311	567	379	315	522	114	37	91	20
8	13	105	34	206	579	322	830	739	101	35	72	17
9	13	75	35	160	530	269	1,320	582	93	33	59	16
10	14	65	35	130	343	231	991	349	83	33	49	16
11	17	268	35	108	262	210	522	259	74	32	44	18
12	18	284	39	99	249	182	357	220	71	57	41	42
13	17	612	44	104	2,960	167	283	406	71	59	37	147
14	18	264	48	472	2,090	155	234	510	65	41	33	59
15	23	153	49	566	705	150	192	388	62	36	31	50
16	27	105	51	347	401	144	167	588	74	41	27	44
17	28	82	55	256	308	133	152	606	80	41	26	59
18	31	72	56	197	297	121	136	415	67	35	32	53
19	32	64	57	147	353	123	121	304	59	33	33	47
20	34	60	58	118	739	128	112	241	55	32	30	52
21	45	55	155	110	654	121	105	199	74	30	27	57
22	42	51	656	94	642	114	103	167	67	27	26	57
23	38	47	597	102	956	121	97	142	69	25	26	53
24	35	45	375	98	564	121	93	126	121	24	25	65
25	34	41	250	97	379	117	87	117	64	24	23	62
26	34	42	178	157	294	123	80	105	55	25	22	55
27	32	39	130	120	273	123	76	95	49	25	22	69
28	32	39	101	100	252	170	89	97	46	23	21	45
29	35	37	83	130	------	213	87	119	46	23	21	41
30	58	36	77	167	------	206	81	3,970	57	27	20	37
31	115	------	70	163	------	179	------	2,250	------	46	19	------
TOTAL	870	3,586	3,513	6,441	16,251	8,267	7,404	14,029	3,717	1,094	1,437	1,276
MEAN	28.1	120	113	208	580	267	247	453	124	35.3	46.4	42.5
MAX	115	612	656	990	2,960	1,400	1,320	3,970	795	59	117	147
MIN	11	36	32	60	75	114	76	76	46	23	19	16
CFSM	.17	.73	.69	1.27	3.54	1.63	1.51	2.76	.76	.22	.28	.26
IN.	.20	.81	.80	1.46	3.69	1.88	1.68	3.18	.84	.25	.33	.29

CAL YR 1970 TOTAL 40,983.4 MEAN 112 MAX 1,290 MIN 8.8 CFSM .68 IN 9.30
WTR YR 1971 TOTAL 67,885.0 MEAN 186 MAX 3,970 MIN 11 CFSM 1.13 IN 15.40

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	1900	8.77	5,490	5-30	1330	8.74	5,450

02014000 POTTS CREEK NEAR COVINGTON, VA.

LOCATION.--Lat 37°43'44", long 80°02'33", Alleghany County, on left bank at downstream side of bridge on State Highway 18, 0.8 mile downstream from Blue Spring Creek, and 5.2 miles southwest of Covington.

DRAINAGE AREA.--153 sq mi.

PERIOD OF RECORD.--October 1928 to September 1956, October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,273.93 ft above mean sea level. Prior to Sept. 30, 1956, nonrecording gage at site 1.3 miles downstream at different datum.

AVERAGE DISCHARGE.--34 years, 167 cfs (14.82 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,420 cfs May 30 (gage height, 8.97 ft), from rating curve extended above 4,000 cfs on basis of velocity-area studies; minimum, 17 cfs Oct. 4-7.

Period of record: Maximum discharge, 7,510 cfs Jan. 23, 1935 (gage height, 10.10 ft, site and datum then in use), from rating curve extended above 4,000 cfs on basis of velocity-area studies; minimum observed, 13 cfs Nov. 29, 1930.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1723: 1935, 1936(M), 1940(M), 1942(M), 1948-49(M), 1951-52(M), 1954(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	172	48	66	110	225	135	102	1,100	66	70	23
2	19	114	46	67	110	214	128	100	611	67	105	28
3	18	147	43	73	115	415	120	102	424	52	71	28
4	18	169	41	78	119	786	108	102	304	41	159	28
5	18	188	35	373	422	559	102	94	236	36	173	28
6	18	165	38	383	887	470	114	105	186	33	125	28
7	18	122	38	256	513	418	261	462	145	32	108	27
8	19	103	33	192	569	354	555	573	135	27	87	26
9	19	89	36	163	535	289	989	474	112	27	72	25
10	19	75	38	135	337	254	982	359	95	27	64	25
11	20	246	37	122	268	234	675	276	84	26	59	39
12	20	244	39	113	260	204	510	234	80	43	58	113
13	20	335	43	115	2,050	180	410	455	82	36	58	148
14	20	236	40	222	2,350	159	334	584	72	28	49	77
15	21	175	37	226	508	146	272	479	72	25	44	55
16	20	130	37	170	579	139	231	712	17[illegible]	32	41	45
17	20	104	43	143	459	126	201	622	31[illegible]	30	39	49
18	20	91	46	115	439	116	177	484	186	24	47	47
19	20	82	46	95	447	120	150	378	135	25	52	53
20	21	79	42	85	620	128	135	300	116	25	46	173
21	31	80	74	85	642	116	128	313	116	23	35	205
22	37	74	235	102	590	107	124	258	101	21	38	156
23	32	69	305	113	760	112	114	217	213	20	39	131
24	25	64	281	122	561	110	108	185	326	21	37	126
25	23	49	219	121	439	104	101	157	213	22	34	102
26	22	61	177	160	358	108	94	135	137	20	32	87
27	22	61	131	140	312	108	88	116	102	20	34	77
28	21	58	105	120	261	132	116	120	83	19	39	68
29	23	53	85	125	------	153	124	281	128	19	32	61
30	69	50	75	160	------	153	107	4,620	97	22	30	55
31	288	------	68	180	------	143	------	2,690	------	44	29	------
TOTAL	980	3,689	2,565	4,624	16,020	6,882	7,693	16,089	6,182	953	1,910	2,133
MEAN	31.6	123	82.7	149	572	222	256	519	206	30.7	61.6	71.1
MAX	288	335	305	383	2,350	786	989	4,620	1,100	67	173	205
MIN	18	49	33	66	110	104	88	94	72	19	29	23
CFSM	.21	.80	.54	.97	3.74	1.45	1.67	3.39	1.35	.20	.40	.46
IN.	.24	.90	.62	1.12	3.90	1.67	1.87	3.91	1.50	.23	.46	.52

CAL YR 1970 TOTAL 41,830 MEAN 115 MAX 1,540 MIN 18 CFSM .75 IN 10.17
WTR YR 1971 TOTAL 69,720 MEAN 191 MAX 4,620 MIN 18 CFSM 1.25 IN 16.95

PEAK DISCHARGE (BASE, 2,400 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-14	0300	8.01	4,030	5-30	1430	8.97	5,420

02015700 BULLPASTURE RIVER AT WILLIAMSVILLE, VA.

LOCATION.--Lat 38°12'00", long 79°34'21", Bath County, on right bank 324 ft upstream from bridge on State Highway 614 at Williamsville, and 0.75 mile upstream from Cowpasture River.

DRAINAGE AREA.--110 sq mi.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,621.98 ft above mean sea level.

AVERAGE DISCHARGE.--11 years, 124 cfs (15.31 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,540 cfs Feb. 13 (gage height, 4.46 ft), from rating curve extended above 3,300 cfs; minimum, 28 cfs Oct. 4-8 (gage height, 1.11 ft).

Period of record: Maximum discharge, 6,230 cfs Mar. 7, 1967 (gage height, 5.91 ft), from rating curve extended above 3,300 cfs; minimum, 21 cfs Dec. 8, 1965; minimum gage height, 0.95 ft June 30, 1962.

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	222	151	112	120	348	166	66	532	84	139	36
2	30	147	128	112	105	332	161	66	404	74	132	52
3	29	343	120	110	96	382	147	69	348	69	112	41
4	29	288	116	180	102	398	135	66	255	63	94	40
5	29	316	108	645	260	326	128	63	222	60	94	40
6	28	282	98	490	288	338	132	69	195	60	71	41
7	28	216	91	338	195	568	161	71	171	69	60	45
8	29	171	84	260	166	455	222	116	166	60	49	41
9	29	139	91	228	156	354	266	94	139	55	47	41
10	29	132	91	200	135	304	255	84	120	55	45	38
11	30	255	88	171	132	272	216	80	108	57	45	49
12	32	255	112	156	120	244	200	84	105	57	57	299
13	32	288	135	161	1,640	233	185	264	105	49	45	332
14	32	222	112	216	1,000	228	171	316	98	52	43	147
15	32	206	105	326	469	233	151	228	108	49	43	116
16	36	171	102	250	338	233	143	338	185	45	43	80
17	36	139	116	216	316	206	132	299	124	45	45	143
18	38	128	120	190	427	185	128	238	105	43	47	108
19	38	116	112	151	467	195	116	195	94	45	52	120
20	40	151	112	132	1,140	211	108	171	94	57	45	556
21	71	200	200	128	866	190	108	151	105	49	43	343
22	74	156	904	128	1,160	195	108	132	105	88	43	216
23	45	143	654	176	1,500	206	102	120	288	52	43	161
24	40	120	398	147	713	190	98	112	310	47	40	135
25	40	102	299	135	476	180	91	105	166	45	38	108
26	38	98	238	206	358	180	84	98	128	45	36	112
27	38	94	200	135	476	180	80	91	105	45	36	105
28	38	91	166	124	409	200	84	91	105	43	36	105
29	36	91	139	116	------	195	80	147	108	41	34	166
30	120	185	124	376	------	190	66	1,910	102	45	34	108
31	348	------	117	206	------	176	------	1,070	------	218	34	------
TOTAL	1,524	5,467	5,631	6,521	13,668	8,127	4,224	7,004	5,200	1,866	1,725	3,924
MEAN	49.2	182	182	210	488	262	141	226	173	60.2	55.6	131
MAX	348	343	904	645	1,640	568	266	1,910	532	218	139	556
MIN	28	91	84	110	96	176	66	63	94	41	34	36
CFSM	.45	1.65	1.65	1.91	4.44	2.38	1.28	2.05	1.57	.55	.51	1.19
IN.	.52	1.85	1.90	2.21	4.62	2.75	1.43	2.37	1.76	.63	.58	1.33

CAL YR 1970 TOTAL 49,500 MEAN 136 MAX 1,770 MIN 28 CFSM 1.24 IN 16.74
WTR YR 1971 TOTAL 64,881 MEAN 178 MAX 1,910 MIN 28 CFSM 1.62 IN 21.94

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	1830	4.46	3,540	5-30	1330	4.29	3,270
2-23	0030	3.75	2,360				

02016000 COWPASTURE RIVER NEAR CLIFTON FORGE, VA.

LOCATION.--Lat 37°47'30", long 79°45'35", Alleghany County, on left bank 100 ft downstream from highway bridge, 2.5 miles upstream from confluence with Jackson River, and 4.0 miles southeast of Clifton Forge.

DRAINAGE AREA.--461 sq mi.

PERIOD OF RECORD.--March 1925 to current year. Records for May 1907 to August 1908, published in WSP 242, are unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 1,006.93 ft above mean sea level (levels by Corps of Engineers). Prior to October 1934, nonrecording gage at site 100 ft upstream at present datum.

AVERAGE DISCHARGE.--46 years, 504 cfs (14.85 inches per year).

EXTREMES.--Current year: Maximum discharge, 13,800 cfs May 31 (gage height, 11.85 ft); minimum, 64 cfs Oct. 18, 19 (gage height, 1.79 ft).

Period of record: Maximum discharge, 34,200 cfs Mar. 18, 1936 (gage height, 18.62 ft), from rating curve extended above 13,000 cfs on basis of slope-area measurement at gage height 15.70 ft; minimum, 38 cfs Sept. 2, 1932; minimum daily, 40 cfs Sept. 1, 1932; minimum gage height, 1.67 ft Sept. 26, 27, 1963, Aug. 27, 28, 1964, July 26, Sept. 8-11, 1966, July 24, 1968.

Flood in March 1913 reached a stage of 20.8 ft, from floodmarks (discharge, about 45,000 cfs, from rating curve extended above 13,000 cfs on basis of records for other stations in James River basin).

REMARKS.--Records good. Low flow affected by springs and by occasional regulation from unknown source. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 952: 1925-41. WRD Va. 1970: Drainage area. See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	1,010	375	268	486	1,220	457	203	3,220	238	331	77
2	69	608	386	349	301	1,030	435	197	1,720	208	315	75
3	69	770	333	359	290	1,660	417	193	1,750	154	261	76
4	67	1,200	293	345	320	2,640	[illegible]	202	[illegible]	162	313	82
5	69	1,330	270	1,000	484	1,620	[illegible]	192	[illegible]	147	272	80
6	65	1,350	244	2,310	878	1,260	359	191	692	142	267	77
7	65	898	222	1,430	1,020	1,280	634	199	572	154	227	75
8	65	654	201	959	1,020	1,560	1,430	231	530	150	180	79
9	66	498	188	759	1,000	1,240	2,000	326	533	138	149	80
10	66	405	186	649	683	968	1,750	304	429	142	137	76
11	67	1,210	180	560	560	838	1,130	277	358	154	137	77
12	72	1,440	186	549	510	740	957	264	316	147	130	103
13	77	1,460	214	687	3,960	652	782	683	297	146	124	1,000
14	70	1,090	285	1,060	8,250	599	674	1,430	279	128	116	519
15	71	768	255	1,680	2,710	572	572	1,080	264	119	104	273
*16	68	627	244	1,390	1,550	578	495	1,300	335	126	100	239
17	66	496	247	1,020	1,180	568	449	1,470	582	121	99	171
18	65	416	276	812	1,060	516	412	1,090	408	110	104	274
19	64	359	316	662	1,280	480	374	825	327	106	114	215
20	68	330	305	534	2,130	556	335	675	280	106	113	443
21	91	442	381	492	3,730	573	314	1,230	268	106	107	1,780
22	125	587	1,940	445	2,810	512	303	1,020	315	111	100	908
23	171	492	3,490	470	5,740	502	289	652	310	117	101	558
24	115	414	2,050	562	3,510	489	274	500	565	114	95	422
25	95	334	1,280	500	2,000	449	259	421	607	101	91	332
26	87	287	914	567	1,470	439	242	374	398	99	87	255
27	83	265	708	720	1,370	430	226	321	311	99	85	246
28	80	246	564	473	1,440	470	239	300	257	95	84	231
29	82	231	460	437	------	529	234	306	258	106	84	233
30	138	221	374	532	------	519	218	6,330	286	114	82	260
31	1,020	------	347	902	------	490	------	10,200	------	195	79	------
TOTAL	3,449	20,438	17,716	23,482	51,642	25,978	17,195	32,997	17,630	4,184	4,588	9,213
MEAN	111	681	571	757	1,844	838	573	1,064	588	135	148	307
MAX	1,020	1,460	3,490	2,310	8,250	2,640	2,000	10,200	3,220	238	331	1,780
MIN	64	221	180	268	290	430	218	191	257	95	79	75
CFSM	.24	1.48	1.24	1.64	4.00	1.82	1.24	2.31	1.28	.29	.32	.67
IN.	.28	1.65	1.43	1.89	4.17	2.10	1.39	2.66	1.42	.34	.37	.74

CAL YR 1970 TOTAL 164,493 MEAN 451 MAX 5,680 MIN 64 CFSM .98 IN 13.27
WTR YR 1971 TOTAL 228,512 MEAN 626 MAX 10,200 MIN 64 CFSM 1.36 IN 18.44

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-14	0530	10.50	10,900	5-31	0900	11.85	13,800
2-23	1400	8.20	6,640				

02016500 JAMES RIVER AT LICK RUN, VA.

LOCATION.--Lat 37°46'25", long 79°47'05", Botetourt County, on right bank at community of Lick Run, 1,000 ft downstream from bridge on U.S. Highway 220, 0.9 mile downstream from confluence of Cowpasture and Jackson Rivers, 1.8 miles south of Iron Gate, and at mile 338.9.

DRAINAGE AREA.--1,373 sq mi.

PERIOD OF RECORD.--April 1925 to current year.

GAGE.--Water-stage recorder. Datum of gage is 978.30 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 26, 1928, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--46 years, 1,547 cfs (15.30 inches per year).

EXTREMES.--Current year: Maximum discharge, 33,900 cfs Feb. 14 (gage height, 19.61 ft); minimum, 178 cfs Oct. 5, 9 (gage height, 1.54 ft).

Period of record: Maximum discharge, 66,600 cfs Mar. 18, 1936 (gage height, 25.65 ft), from rating curve extended above 42,400 cfs on basis of records for other stations in James River basin; minimum, 148 cfs Sept. 7, 1966 (gage height, 1.42 ft).

Flood in November 1877 reached a stage of about 33 ft (discharge, about 120,000 cfs). Flood in March 1913 reached a stage of 30.4 ft, from floodmarks (discharge, about 98,000 cfs).

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 852: 1936-37. WSP 972: 1927, 1930(M), 1932(M), 1935-36. WSP 1303: 1927-28(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	204	3,040	855	848	1,430	3,570	1.600	705	9,470	826	794	274
2	204	1,800	1,000	781	991	3,140	1,460	677	5,410	730	974	267
3	199	2,020	882	804	1,070	4,700	1,360	686	3,960	665	870	264
4	186	3,180	798	873	1,090	8,350	1,230	704	3,010	591	983	281
5	186	3,390	731	3,370	1,390	5,580	1,120	677	2,430	536	1,040	265
6	182	3,600	709	7,170	5,600	4,290	1,130	671	2,250	510	914	265
7	186	2,900	685	4,500	4,170	4,020	1,590	1,250	1,920	530	781	256
8	182	2,200	647	3,130	4,100	4,540	2,500	1,910	1,780	511	650	256
9	183	1,700	602	2,430	4,220	3,790	6,200	2,380	1,730	477	553	256
10	195	1,350	565	2,020	2,760	3,060	5,600	1,890	1,450	510	491	249
11	199	2,630	535	1,680	2,100	2,670	4,000	1,540	1,210	527	465	263
12	204	4,050	525	1,540	1,990	2,330	3,000	1,340	1,080	508	445	390
13	212	4,350	559	1,740	11,300	2,020	2,400	2,440	1,020	541	417	1,950
14	199	3,680	828	2,960	25,800	1,860	2,100	4,470	950	479	408	1,290
15	208	2,500	779	5,030	8,590	1,830	1,800	3,830	898	432	371	761
16	199	1,900	741	4,250	5,240	1,850	1,650	4,360	998	453	352	609
17	191	1,450	742	3,270	3,990	1,810	1,490	4,950	1,710	432	341	517
18	199	1,170	778	2,650	3,550	1,630	1,340	3,880	1,320	399	347	529
19	199	1,010	823	2,040	3,920	1,510	1,200	3,000	1,070	383	395	590
20	208	942	793	1,450	5,910	1,660	1,070	2,390	931	386	387	1,320
21	308	1,010	972	1,290	9,610	1,660	1,010	2,750	1,030	382	366	3,250
22	344	1,220	4,690	1,290	7,530	1,490	973	2,300	1,060	382	342	2,020
23	455	1,080	9,210	1,300	13,500	1,490	932	1,710	1,060	369	347	1,380
24	370	966	5,930	1,470	9,140	1,540	886	1,410	1.650	360	333	1,120
25	308	836	3,980	1,330	5,770	1,430	831	1,220	1,760	349	318	918
26	277	741	2,960	1,490	4,390	1,400	774	1,100	1,220	344	305	770
27	268	719	2,240	1,940	3,940	1,360	732	969	986	345	296	709
28	251	707	1,740	1,310	4,060	1,460	786	928	834	331	297	701
29	255	689	1,330	1,210	------	1,730	815	1,010	830	345	299	602
30	465	668	1,050	1,510	------	1,800	735	17,900	998	370	290	769
31	2,560	------	995	2,710	------	1,750	------	25,400	------	525	283	------
TOTAL	9,786	57,498	49,674	69,386	157,151	81,320	52,314	100,447	56,025	14,528	15,454	23,091
MEAN	316	1,917	1,602	2,238	5,613	2,623	1,744	3,240	1,868	469	499	770
MAX	2,560	4,350	9,210	7,170	25,800	8,350	6,200	25,400	9,470	826	1,040	3,250
MIN	182	668	525	781	991	1,360	732	671	830	331	283	249
CFSM	.23	1.40	1.17	1.63	4.09	1.91	1.27	2.36	1.36	.34	.36	.56
IN.	.27	1.56	1.35	1.88	4.26	2.20	1.42	2.72	1.52	.39	.42	.63

CAL YR 1970 TOTAL 495,635 MEAN 1,358 MAX 18,200 MIN 182 CFSM .99 IN 13.43
WTR YR 1971 TOTAL 686,674 MEAN 1,881 MAX 25,800 MIN 182 CFSM 1.37 IN 18.60

PEAK DISCHARGE (BASE, 12,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-14	0730	19.61	33,900	5-31	0630	19.17	32,700
2-23	1400	11.86	15,600				

02017500 JOHNS CREEK AT NEW CASTLE, VA.

LOCATION.--Lat 37°30'22" (revised), long 80°06'25", Craig County, on right bank 20 ft downstream from bridge on State Highway 615 at New Castle, and 1,700 ft upstream from mouth.

DRAINAGE AREA.--104 sq mi.

PERIOD OF RECORD.--April 1926 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,254.30 ft above mean sea level. Prior to June 7, 1937, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--45 years, 120 cfs (15.67 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,500 cfs Feb. 13 (gage height, 8.88 ft); minimum, 8.5 cfs Oct. 5 (gage height, 2.37 ft).

Period of record: Maximum discharge, 8,000 cfs Jan. 23, 1935 (gage height, 10.80 ft), from rating curve extended above 3,200 cfs on basis of slope-area measurement of peak flow; minimum, 6.0 cfs Dec. 5, 1946, result of freezeup; minimum daily, 6.6 cfs Oct. 1, 1968; minimum gage height, 2.33 ft July 28, Sept. 7, 1966.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 972: 1935-36(M), 1940(M). WSP 1203: 1928, 1935. WSP 1303: 1927(M), 1928, 1929-34(M), 1935. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	119	33	52	98	172	99	87	567	48	120	12
2	10	107	32	51	96	162	98	85	435	50	164	12
3	9.9	128	32	50	98	398	92	88	338	42	89	12
4	9.1	136	30	50	125	556	85	86	277	36	65	12
5	8.7	155	27	102	223	378	80	81	229	33	53	12
6	8.7	113	27	167	505	325	105	99	181	30	49	12
7	9.1	91	26	132	352	289	342	291	167	29	46	11
8	9.1	80	26	113	330	245	469	575	159	27	38	11
9	9.4	68	26	102	290	206	548	423	125	25	32	11
10	9.4	66	25	91	240	177	480	346	119	23	28	12
11	9.6	162	25	80	218	163	379	291	96	24	26	13
12	9.9	159	26	79	199	143	321	312	84	40	32	22
13	10	264	27	82	1,250	130	279	982	81	27	29	30
14	9.4	165	26	104	1,090	118	237	560	73	23	24	18
15	9.6	138	24	119	582	110	195	428	69	21	21	15
16	9.1	114	25	101	467	104	171	587	251	21	19	15
17	8.7	96	29	95	421	94	153	470	256	18	18	15
18	8.9	79	31	91	416	86	135	382	177	19	19	17
19	9.1	67	30	88	412	88	118	316	144	19	20	23
20	10	65	29	82	466	89	107	321	136	19	18	36
21	17	65	48	76	406	82	100	448	121	18	17	54
22	19	59	195	73	410	78	97	294	126	17	16	36
23	15	55	193	85	500	77	90	246	164	16	17	31
24	13	51	175	88	379	73	87	211	145	16	16	29
25	13	54	147	94	319	70	80	177	120	15	15	25
26	14	44	128	100	276	74	74	146	99	16	14	23
27	13	42	107	110	243	77	69	123	82	16	14	21
28	12	39	90	125	201	104	102	131	69	15	13	20
29	15	37	76	145	------	113	102	272	59	17	13	18
30	60	47	64	120	------	110	92	1,940	52	39	12	17
31	139	------	56	100	------	104	------	1,000	------	58	12	------
TOTAL	517.7	2,865	1,835	2,947	10,612	4,995	5,386	11,798	5,001	817	1,069	595
MEAN	16.7	95.5	59.2	95.1	379	161	180	381	167	26.4	34.5	19.8
MAX	139	264	195	167	1,250	556	548	1,940	567	58	164	54
MIN	8.7	37	24	50	96	70	69	81	52	15	12	11
CFSM	.16	.92	.57	.91	3.64	1.55	1.73	3.66	1.61	.25	.33	.19
IN.	.19	1.02	.66	1.05	3.80	1.79	1.93	4.22	1.79	.29	.38	.21

CAL YR 1970 TOTAL 30,678.6 MEAN 84.1 MAX 834 MIN 8.7 CFSM .81 IN 10.97
WTR YR 1971 TOTAL 48,437.7 MEAN 133 MAX 1,940 MIN 8.7 CFSM 1.28 IN 17.33

PEAK DISCHARGE (BASE, 2,100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	2300	8.88	2,500	5-30	0600	8.65	2,250

02018000 CRAIG CREEK AT PARR, VA.

LOCATION (revised).--Lat 37°39'57", long 79°54'42", Botetourt County, on right bank 12 ft upstream from Chesapeake and Ohio Railway bridge, 700 ft downstream from Stony Run, 0.2 mile northeast of Horton, 0.4 mile northwest of Parr, and 12 miles upstream from mouth.

DRAINAGE AREA.--329 sq mi.

PERIOD OF RECORD.--April 1925 to current year.

GAGE.--Water-stage recorder. Datum of gage is 992.50 ft above mean sea level (levels by Corps of Engineers). Prior to June 7, 1937, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--46 years, 367 cfs (15.15 inches per year).

EXTREMES.--Current year: Maximum discharge, 7,640 cfs May 30 (gage height, 11.23 ft); minimum, 31 cfs Oct. 7 (gage height, 3.27 ft).

Period of record: Maximum discharge, 19,100 cfs Jan. 23, 1935 (gage height, 17.0 ft, from graph based on gage readings), from rating curve extended above 11,000 cfs; minimum daily, 25 cfs Sept. 4, 1966; minimum gage height, 3.15 ft July 17, 18, 1966.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 852: 1937. WSP 892: 1935-36. WSP 1303: 1929-30(M), 1932-35(M), 1937-38(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	1,040	134	215	430	563	334	199	2,350	196	178	50
2	36	618	128	205	460	519	309	191	1,500	183	270	52
3	34	925	121	210	570	794	293	191	1,100	183	289	54
4	32	772	115	240	710	2,120	266	191	841	160	229	56
5	32	754	111	260	780	1,500	245	188	682	143	202	54
6	32	640	104	748	1,500	1,100	248	188	574	134	175	53
7	32	480	106	670	1,400	925	652	278	480	125	170	51
8	32	370	106	530	1,250	772	1,840	1,150	632	134	157	50
9	34	293	98	426	1,090	658	1,860	1,300	426	115	136	50
10	37	248	102	370	880	574	1,630	890	343	111	123	49
11	37	792	100	325	712	519	1,260	718	305	145	125	60
12	42	995	106	293	652	470	995	634	263	275	108	74
13	40	925	106	293	2,340	415	802	2,100	245	229	95	138
14	39	796	108	343	4,620	380	682	2,370	229	145	96	134
15	41	565	100	496	2,010	348	568	1,420	213	125	92	98
16	44	448	102	436	1,380	325	475	1,600	381	125	84	79
17	37	348	109	380	1,100	297	410	1,620	942	121	77	74
18	37	289	125	352	1,030	274	361	1,220	590	102	76	72
19	37	248	138	305	995	266	317	960	448	95	76	71
20	39	232	140	255	1,140	281	281	778	366	95	76	320
21	63	248	160	248	1,180	259	259	1,050	514	95	80	508
22	77	245	588	235	1,030	242	245	925	395	90	84	405
23	80	229	876	248	1,880	232	232	736	400	84	82	285
24	69	213	730	278	1,420	226	216	618	400	80	74	232
25	58	188	585	293	1,030	213	208	524	385	80	62	191
26	5[illegible]	172	492	348	855	213	191	431	309	82	58	162
27	52	165	395	375	742	219	180	361	263	82	56	149
28	51	160	325	400	646	263	194	334	238	82	56	132
29	54	150	270	435	------	380	238	483	222	87	54	119
30	121	140	255	485	------	410	216	5,040	210	85	54	109
31	1,920	------	225	400	------	370	------	5,130	------	119	51	------
TOTAL	3,328	13,708	7,160	11,087	33,832	16,127	16,007	33,818	16,246	3,907	3,545	3,930
MEAN	107	457	231	358	1,208	520	534	1,091	542	126	114	131
MAX	1,920	1,040	876	748	4,620	2,120	1,860	5,130	2,350	275	289	508
MIN	32	140	98	205	430	213	180	188	210	80	51	49
CFSM	.33	1.39	.70	1.09	3.67	1.58	1.62	3.32	1.65	.38	.35	.40
IN.	.38	1.55	.81	1.25	3.83	1.82	1.81	3.82	1.84	.44	.40	.44

CAL YR 1970 TOTAL 104,184 MEAN 285 MAX 3,820 MIN 32 CFSM .87 IN 11.78
WTR YR 1971 TOTAL 162,695 MEAN 446 MAX 5,130 MIN 32 CFSM 1.36 IN 18.40

PEAK DISCHARGE (BASE, 4,200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-14	0500	10.01	5,660	5-30	2100	11.23	7,640

02018500 CATAWBA CREEK NEAR CATAWBA, VA.

LOCATION.--Lat 37°28'05", long 80°00'20", Botetourt County, on right bank 40 ft downstream from highway bridge, 1.0 mile downstream from Little Catawba Creek, 1.9 miles west of Haymakertown, and 8.2 miles northeast of Catawba.

DRAINAGE AREA.--34.3 sq mi.

PERIOD OF RECORD.--September 1943 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,299.96 ft above mean sea level. Prior to Aug. 1, 1953, nonrecording gage at site 80 ft downstream at same datum.

AVERAGE DISCHARGE.--28 years, 34.0 cfs (13.46 inches per year), adjusted for pumpage since October 1952.

EXTREMES.--Current year: Maximum discharge, 1,750 cfs May 30 (gage height, 4.99 ft), from rating curve extended as explained below; minimum, 2.6 cfs Oct. 15 (gage height, 1.29 ft); minimum daily, 3.0 cfs Oct. 4, 5.

Period of record: Maximum discharge, 5,670 cfs Mar. 1, 1954 (gage height, 6.58 ft), from rating curve extended above 1,100 cfs; minimum, 0.80 cfs Nov. 21, 1963; minimum daily, 0.90 cfs Nov. 22, 1963; minimum gage height, 0.54 ft Sept. 7-11, 1944, site then in use.

Flood in August 1940 reached a stage of 13.26 ft, from information by observer.

REMARKS.--Records good except those for period of no gage-height record, which are fair. Lone Star Cement Co. pumps about 0.4 cfs below gage and returns it above gage pool. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1303: 1944-45(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	209	17	21	15	52	31	19	140	25	22	5.3
2	3.5	97	16	20	14	54	30	19	100	26	18	11
3	3.4	125	15	18	13	156	28	19	80	22	14	7.0
4	3.0	92	13	18	16	197	26	18	60	20	13	6.2
5	3.0	91	13	58	29	107	24	17	50	18	12	5.9
6	3.2	66	13	68	57	84	36	19	40	37	13	5.6
7	3.3	51	13	50	66	74	115	24	80	29	12	5.3
8	3.2	40	12	40	91	62	156	43	65	22	11	5.2
9	3.5	33	12	36	77	54	162	43	50	20	9.9	4.9
10	3.8	43	12	32	51	50	101	36	40	21	9.4	5.4
11	3.8	185	11	29	46	46	78	31	30	96	9.3	21
12	4.3	97	13	29	67	41	65	31	35	45	11	44
13	4.6	94	12	29	845	38	57	113	32	30	9.2	24
14	3.9	71	11	37	276	35	50	87	31	25	8.3	12
15	3.6	57	10	40	120	34	44	67	150	22	7.9	9.5
16	3.9	46	12	33	87	31	40	107	221	20	7.7	8.3
17	3.8	38	15	30	73	29	37	85	107	18	7.6	7.7
18	4.1	34	17	28	68	27	34	67	68	16	8.7	8.1
19	4.1	30	15	24	67	28	31	56	54	16	8.8	9.3
20	4.8	36	14	22	82	26	29	56	67	15	7.8	90
21	12	37	36	23	77	24	28	64	65	14	7.2	73
22	8.4	32	71	22	105	23	26	47	51	13	7.2	37
23	4.7	29	56	27	197	23	25	39	45	13	7.3	27
24	3.9	26	46	25	103	22	25	35	39	12	6.5	25
25	3.7	23	38	24	80	21	23	31	34	12	6.2	20
26	3.5	22	34	31	68	23	22	28	31	13	6.0	18
27	3.4	21	29	25	65	24	21	25	27	13	6.2	15
28	3.4	20	26	26	56	33	25	33	25	11	6.0	14
29	5.1	19	23	27	------	42	21	60	24	11	5.6	12
30	291	18	21	29	------	37	20	1,000	26	13	5.4	12
31	746	------	21	25	------	33	------	250	------	16	5.3	------
TOTAL	1,159.4	1,782	667	946	2,911	1,530	1,410	2,569	1,867	684	289.5	548.7
MEAN	37.4	59.4	21.5	30.5	104	49.4	47.0	82.9	62.2	22.1	9.34	18.3
MAX	746	209	71	68	845	197	162	1,000	221	96	22	90
MIN	3.0	18	10	18	13	21	20	17	24	11	5.3	4.9
(*)	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4
MEAN‡	37.0	59.0	21.1	30.1	104	49.0	46.6	82.5	61.8	21.7	8.94	17.9
CFSM‡	1.08	1.72	.62	.88	3.03	1.43	1.36	2.41	1.80	.63	.26	.52
IN.‡	1.24	1.92	.72	1.02	3.16	1.65	1.52	2.78	2.01	.73	.30	.58

CAL YR 1970 TOTAL 9,977.0 MEAN 27.3 MAX 746 MIN 3.0 MEAN‡ 26.9 CFSM‡ .78 IN.‡ 10.66
WTR YR 1971 TOTAL 16,363.6 MEAN 44.8 MAX 1,000 MIN 3.0 MEAN‡ 44.4 CFSM‡ 1.29 IN.‡ 17.63

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-30	2345	4.94	1,690	5-30	UNKNOWN	4.99	1,750
2-13	1230	4.85	1,580	7-11	0145	4.38	1,060

* PUMPAGE, EQUIVALENT IN CUBIC FEET PER SECOND, BY LONE STAR CEMENT CO.

‡ ADJUSTED FOR PUMPAGE.

NOTE.--NO GAGE-HEIGHT RECORD MAY 29 TO JUNE 15.

02019500 JAMES RIVER AT BUCHANAN, VA.

LOCATION.--Lat 37°31'50", long 79°40'45", Botetourt County, on left bank at Chesapeake & Ohio Railway station at Buchanan, 300 ft upstream from bridge on U.S. Highway 11, 1,000 ft upstream from Purgatory Creek, 1.5 miles downstream from Looney Creek, and at mile 301.2.

DRAINAGE AREA.--2,075 sq mi.

PERIOD OF RECORD.--February 1898 to current year. Monthly discharge only for some periods, published in WSP 1303. Records for August 1895 to Feb. 11, 1898, published in WSP 11, 15, and 27 are in error and should not be used. Gage-height records collected at this site since 1893 are contained in reports of the National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 802.90 ft above mean sea level. Prior to July 1, 1927, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--73 years, 2,425 cfs (15.87 inches per year).

EXTREMES.--Current year: Maximum discharge, 46,600 cfs May 31 (gage height, 19.07 ft); minimum, 240 cfs Oct. 5, 6 (gage height, 1.65 ft).

Period of record: Maximum discharge, about 105,000 cfs Mar. 27, 1913 (gage height, 31 ft, from floodmarks), from rating curve extended above 53,000 cfs on basis of records for other stations in James River basin; minimum, 202 cfs Sept. 8, 1966 (gage height, 1.44 ft).

Flood in November 1877 reached a stage of 34.9 ft, from floodmark (discharge, about 125,000 cfs).

REMARKS.--Records good. Water-quality records for the current year are included in this report.

REVISIONS (WATER YEARS).--WSP 602: 1917-24. WSP 952: 1913(M). WSP 972: 1935-36. WSP 1303: 1898-1916, 1917-20(M), 1922(M), 1924(M). WSP 1383: 1927. WRD Va. 1970: Drainage area. See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	273	5,920	939	1,430	2,300	4,500	2,210	1,190	17,600	1,360	942	395
2	270	3,380	1,340	1,260	1,520	3,940	2,050	1,140	8,880	1,290	1,390	395
3	266	3,570	1,280	1,290	1,490	4,940	1,920	1,140	6,020	1,150	1,520	386
4	258	4,340	1,170	1,350	1,580	11,300	1,780	1,140	4,670	1,030	1,400	382
5	247	5,080	1,060	1,800	1,710	9,250	1,650	1,140	3,650	914	1,630	397
6	243	4,540	984	8,110	4,950	6,380	1,620	1,110	3,340	887	1,520	375
7	248	3,940	904	6,260	6,180	5,420	2,580	1,220	2,950	905	1,350	369
8	247	3,040	855	4,250	6,080	5,550	6,720	2,510	2,830	871	1,130	360
9	249	2,430	799	3,250	6,600	5,010	8,810	3,950	2,640	837	957	353
10	251	2,000	757	2,780	4,760	4,040	8,440	3,300	2,270	816	829	352
11	253	3,460	757	2,400	3,390	3,540	6,740	2,670	1,940	1,750	787	359
12	261	5,880	764	2,160	3,090	3,180	4,990	2,320	1,760	1,390	753	465
13	265	5,530	792	2,270	11,100	2,820	4,000	5,100	1,620	1,320	679	958
14	273	5,480	932	2,860	39,900	2,570	3,420	8,040	1,540	1,080	640	2,100
15	266	3,790	1,060	5,440	15,900	2,440	2,950	6,580	1,700	872	607	1,220
16	264	2,930	1,020	5,400	8,460	2,390	2,570	6,480	3,890	823	556	894
17	249	2,330	1,040	4,130	6,010	2,360	2,320	7,740	3,670	819	529	772
18	244	1,930	1,060	3,370	5,100	2,200	2,120	6,180	3,030	749	525	675
19	244	1,670	1,150	2,830	5,040	2,040	1,930	4,740	2,330	684	553	769
20	247	1,570	1,150	2,160	6,120	2,050	1,740	3,740	1,950	656	586	1,060
21	333	1,640	1,180	1,900	10,900	2,160	1,620	3,570	1,900	636	555	3,530
22	459	1,770	3,320	1,860	9,410	1,990	1,550	4,000	2,000	619	527	3,120
23	469	1,720	9,560	1,860	14,400	1,880	1,500	2,990	1,780	602	509	2,130
24	544	1,550	7,820	1,930	13,600	1,900	1,440	2,480	2,010	584	496	1,690
25	453	1,410	5,220	1,990	8,200	1,860	1,370	2,160	2,480	576	471	1,440
26	382	1,260	3,790	1,940	6,020	1,820	1,300	1,920	2,020	564	453	1,220
27	347	1,170	3,030	2,390	5,060	1,800	1,220	1,680	1,630	552	438	1,050
28	326	1,110	2,440	2,140	4,900	1,820	1,260	1,570	1,440	537	431	932
29	323	1,040	2,020	1,820	------	2,210	1,300	1,670	1,290	523	430	924
30	589	984	1,640	2,030	------	2,400	1,290	16,400	1,360	600	421	936
31	5,510	------	1,540	2,750	------	2,360	------	42,400	------	732	410	------
TOTAL	14,853	86,464	61,373	87,410	213,770	108,120	84,410	152,270	96,190	26,728	24,024	29,947
MEAN	479	2,882	1,980	2,820	7,635	3,488	2,814	4,912	3,206	862	775	998
MAX	5,510	5,920	9,560	8,110	39,900	11,300	8,810	42,400	17,600	1,750	1,630	3,530
MIN	243	984	757	1,260	1,490	1,800	1,220	1,110	1,290	523	410	352
CFSM	.23	1.39	.95	1.36	3.68	1.68	1.36	2.37	1.55	.42	.37	.48
IN.	.27	1.55	1.10	1.57	3.83	1.94	1.51	2.73	1.72	.48	.43	.54

CAL YR 1970 TOTAL 674,893 MEAN 1,849 MAX 35,800 MIN 243 CFSM .89 IN 12.10
WTR YR 1971 TOTAL 985,559 MEAN 2,700 MAX 42,400 MIN 243 CFSM 1.30 IN 17.67

PEAK DISCHARGE (BASE, 21,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-14	1530	18.90	45,900	5-31	1215	19.07	46,600

02020500 CALFPASTURE RIVER ABOVE MILL CREEK, AT GOSHEN, VA.

LOCATION (revised).--Lat 37°59'16", long 79°29'38", Rockbridge County, on left bank 20 ft upstream from bridge on State Highway 42 at Goshen, and 400 ft upstream from Mill Creek.

DRAINAGE AREA.--144 sq mi.

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,384.84 ft above mean sea level.

AVERAGE DISCHARGE.--33 years, 151 cfs (14.24 inches per year).

EXTREMES.--Current year: Maximum discharge, 16,600 cfs May 30 (gage height, 11.97 ft), from rating curve extended as explained below; minimum, 1.4 cfs Oct. 8.

Period of record: Maximum discharge, 16,600 cfs May 30, 1971 (gage height, 11.97 ft), from rating curve extended above 9,200 cfs on basis of slope-area measurement at gage height 11.97 ft; maximum gage height, 12.14 ft June 18, 1949; no flow Sept. 5, 6, 1957, and Sept. 28, 1959, result of diversion; minimum gage height, 0.48 ft Sept. 6, 1957.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	273	176	94	66	277	136	46	931	57	33	5.3
2	2.3	270	159	93	68	255	127	44	510	51	52	5.2
3	2.2	362	130	83	70	348	121	46	339	43	48	5.2
4	2.0	477	112	82	79	505	110	42	250	36	41	5.0
5	2.1	441	95	977	110	375	103	39	204	32	36	5.3
6	2.0	494	84	951	252	344	107	40	165	30	37	6.3
7	1.6	335	74	490	222	420	169	43	138	38	41	6.8
8	1.7	256	66	322	210	485	356	52	132	41	37	6.4
9	2.0	200	60	247	180	367	727	55	105	50	32	6.6
10	2.2	161	55	201	120	285	698	51	92	44	29	6.0
11	2.4	393	51	167	130	241	503	49	89	41	27	7.1
12	2.7	665	53	149	148	201	359	51	81	53	26	16
13	2.7	411	69	147	1,800	174	283	167	75	48	22	21
14	2.7	256	72	174	2,140	156	235	421	65	42	22	18
15	3.0	207	73	289	643	151	198	337	69	33	22	16
16	2.8	181	75	264	390	158	171	410	186	29	21	15
17	2.5	161	79	241	289	162	149	460	168	27	20	28
18	2.5	135	88	194	248	148	131	353	132	24	19	42
19	2.7	113	96	148	248	144	113	268	110	23	16	58
20	3.2	106	99	125	516	189	100	216	127	21	13	339
21	8.8	199	119	115	690	185	93	1,870	405	15	11	355
22	12	218	723	106	695	169	88	743	213	14	10	222
23	9.1	182	969	111	1,340	161	82	427	239	12	10	150
24	7.5	143	532	109	772	151	77	296	435	12	8.8	107
25	6.6	114	340	96	479	139	71	232	239	13	7.8	81
26	6.1	95	257	92	351	136	65	184	171	13	7.3	67
27	6.0	83	198	85	321	124	59	145	129	7.2	7.3	62
28	6.0	74	165	79	303	134	60	131	96	9.0	7.1	54
29	6.4	65	132	76	------	142	55	147	75	12	6.6	57
30	16	95	108	110	------	148	50	7,980	64	27	6.2	57
31	180	------	97	120	------	147	------	3,330	------	42	5.7	------
TOTAL	312.4	7,165	5,406	6,537	12,880	7,021	5,596	18,675	6,034	939.2	681.8	1,830.2
MEAN	10.1	239	174	211	460	226	187	602	201	30.3	22.0	61.0
MAX	180	665	969	977	2,140	505	727	7,980	931	57	52	355
MIN	1.6	65	51	76	66	124	50	39	64	7.2	5.7	5.0
CFSM	.07	1.66	1.21	1.47	3.19	1.57	1.30	4.18	1.40	.21	.15	.42
IN.	.08	1.85	1.40	1.69	3.33	1.81	1.45	4.82	1.56	.24	.18	.47

CAL YR 1970 TOTAL 45,722.42 MEAN 125 MAX 1,620 MIN .80 CFSM .87 IN 11.81
WTR YR 1971 TOTAL 73,077.60 MEAN 200 MAX 7,980 MIN 1.6 CFSM 1.39 IN 18.88

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	2330	7.45	4,360	5-30	1830	11.97	16,600
5-21	0700	6.55	3,190				

02021500 MAURY RIVER AT ROCKBRIDGE BATHS, VA.

LOCATION.--Lat 37°54'26", long 79°25'20", Rockbridge County, on right bank at Rockbridge Baths, 700 ft upstream from bridge on State Highway 39, and 1.0 mile upstream from Hays Creek.

DRAINAGE AREA.--329 sq mi.

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only for some periods, published in WSP 1303. Prior to October 1945, published as North River at Rockbridge Baths.

GAGE.--Water-stage recorder. Datum of gage is 1,100.33 ft above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--43 years, 350 cfs (14.45 inches per year).

EXTREMES.--Current year: Maximum discharge, 18,600 cfs May 30 (gage height, 10.73 ft); minimum, 11 cfs Oct. 4, 5 (gage height, 0.85 ft).

Period of record: Maximum discharge, 33,000 cfs Mar. 17, 1936 (gage height, 13.07 ft), from rating curve extended above 16,000 cfs; minimum, 5.8 cfs Sept. 10, 1966 (gage height, 0.79 ft).

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 972: 1929-40, 1941(M). WSP 1002: 1930(m). WSP 1553: 1931(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	466	231	233	263	711	254	124	2,190	108	97	276
2	13	349	223	293	160	658	224	121	1,370	104	124	215
3	13	672	193	463	175	1,060	215	127	856	98	131	209
4	12	739	167	608	155	1,550	195	113	645	96	128	[illegible]
5	11	839	145	1,550	262	1,110	180	98	533	95	231	[illegible]
6	12	893	131	2,070	637	365	182	87	667	61	174	[illegible]
7	12	567	117	1,210	579	993	309	92	375	59	135	154
8	13	399	107	853	721	1,010	586	147	354	86	99	131
9	13	296	100	632	836	916	1,360	166	346	76	73	165
10	14	225	96	485	496	665	1,330	145	263	83	63	199
11	14	953	92	397	438	581	1,070	133	218	96	54	163
12	15	1,330	101	422	437	487	917	132	193	86	62	145
13	15	942	122	522	3,710	421	718	491	170	82	52	154
14	14	563	126	659	4,860	376	592	1,020	138	73	47	91
15	15	436	124	957	1,940	348	485	762	128	66	42	87
16	15	334	127	815	1,150	341	407	1,170	675	69	39	62
17	12	263	140	564	953	328	354	1,250	576	63	37	63
18	12	297	160	553	713	299	319	849	379	56	72	72
19	16	178	171	397	593	336	272	657	324	52	65	75
20	24	178	170	318	1,130	402	232	586	265	51	61	613
21	43	292	199	304	1,510	375	220	2,350	834	48	35	727
22	62	336	1,050	308	1,510	338	210	1,400	693	42	36	644
23	41	282	1,690	335	2,950	319	197	930	676	32	34	288
24	32	224	1,190	334	1,910	295	187	611	1,259	31	31	213
25	29	180	802	282	1,250	272	176	682	672	33	29	162
26	27	156	606	362	940	279	164	342	392	32	27	148
27	26	139	459	309	926	260	150	269	290	32	67	124
28	26	126	361	220	803	321	159	295	193	30	137	106
29	27	113	288	235	------	350	147	360	239	31	57	93
30	69	125	211	366	------	360	132	9,060	178	63	119	101
31	529	------	261	379	------	303	------	7,390	------	92	197	------
TOTAL	1,195	12,430	9,958	17,427	31,783	16,819	12,032	31,625	15,532	2,043	2,452	5,272
MEAN	38.2	414	321	562	1,135	543	401	1,020	518	65.9	79.1	176
MAX	529	1,330	1,690	2,070	4,860	1,550	1,360	9,060	2,190	108	231	727
MIN	11	113	92	220	160	260	132	87	128	30	27	28
CFSM	.12	1.26	.98	1.71	3.45	1.65	1.22	3.10	1.57	.20	.24	.54
IN.	.13	1.41	1.13	1.97	3.59	1.90	1.36	3.58	1.76	.23	.28	.60

CAL YR 1970 TOTAL 106,736 MEAN 292 MAX 3,900 MIN 11 CFSM .89 IN 12.07
WTR YR 1971 TOTAL 158,558 MEAN 434 MAX 9,060 MIN 11 CFSM 1.32 IN 17.93

PEAK DISCHARGE (BASE, 4,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-14	0100	7.95	7,850	5-30	2230	10.73	18,600

02022500 KERRS CREEK NEAR LEXINGTON, VA.

LOCATION (revised).--Lat 37°49'32", long 79°26'36", Rockbridge County, on right bank 0.2 mile upstream from bridge on State Highway 602, 1.4 miles upstream from mouth, and 2.9 miles north of Lexington.

DRAINAGE AREA.--35.0 sq mi.

PERIOD OF RECORD.--October 1926 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Datum of gage is 980.32 ft above mean sea level (levels by Corps of Engineers). Jan. 27, 1927, to Sept. 30, 1953, nonrecording gage at site 1,000 ft downstream at different datum.

AVERAGE DISCHARGE.--45 years, 34.5 cfs (13.39 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,220 cfs Feb. 13 (gage height, 5.90 ft), from rating curve extended above 1,100 cfs on basis of two slope-area measurements at gage heights 8.52 and 13.38 ft; minimum, 3.1 cfs Oct. 23 (gage height, 2.31 ft).

Period of record: Maximum discharge, 23,000 cfs Sept. 10, 1950 (gage height, 13.8 ft, site and datum then in use), from rating curve extended above 800 cfs on basis of contracted-opening and slope-area measurements of peak flow; minimum, 0.90 cfs July 22, 1966 (result of temporary dam upstream); minimum daily, 4.0 cfs many days in August and September 1932, Nov. 21, 1938 and July 22, 1966.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1203: 1927-29, 1930-34(M), 1935-40, 1941(M), 1942, 1943-48(M), 1949. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	18	11	11	13	47	21	13	95	15	11	7.6
2	4.8	12	10	12	16	46	21	15	67	16	36	7.6
3	4.8	31	9.9	12	14	126	20	15	50	14	25	7.9
4	4.8	38	9.5	14	14	128	18	15	41	14	20	7.9
5	4.8	37	8.2	118	26	83	17	14	39	13	50	7.6
6	5.1	22	8.4	86	37	71	19	15	64	14	30	7.4
7	5.1	20	8.2	51	44	63	48	16	56	14	23	7.4
8	5.1	15	8.4	37	88	53	77	16	82	13	18	7.9
9	5.3	14	8.4	30	64	44	82	15	76	15	15	7.6
10	5.5	14	8.7	26	46	41	64	14	46	17	13	7.4
11	5.5	64	8.4	24	37	38	49	13	36	12	13	9.5
12	6.6	42	9.5	21	35	33	42	14	32	12	14	22
13	5.3	27	9.5	25	539	31	37	103	29	12	11	20
14	5.3	22	8.7	71	206	29	30	76	25	11	11	11
15	5.3	20	8.4	82	101	27	27	50	26	10	9.5	9.2
16	5.1	17	9.2	57	72	26	25	106	30	13	9.5	8.9
17	5.5	15	10	43	58	25	24	70	25	10	9.5	9.2
18	5.5	14	10	31	50	24	22	51	23	9.9	10	9.2
19	5.3	13	10	28	49	26	20	39	21	10	10	15
20	5.7	18	9.9	25	63	25	19	32	19	10	9.5	39
21	12	22	16	23	60	23	18	29	20	8.9	8.9	43
22	8.4	18	37	22	92	22	18	24	18	8.7	8.9	25
23	5.9	16	35	27	140	21	17	22	18	8.7	9.2	20
24	6.4	13	30	23	86	20	17	20	17	8.7	7.9	17
25	5.9	12	25	22	65	19	15	19	16	8.9	7.9	14
26	5.7	17	20	23	57	20	15	17	16	8.4	7.9	13
27	5.7	12	17	21	64	19	15	16	15	8.4	8.4	12
28	5.7	12	15	18	53	22	18	19	14	7.9	8.2	12
29	5.9	11	13	16	------	24	15	31	16	11	7.9	11
30	24	11	12	15	------	23	14	413	18	12	7.6	11
31	63	------	11	14	------	22	------	182	------	16	7.4	------
TOTAL	254.1	617	415.3	1,028	2,189	1,221	844	1,494	1,050	362.5	438.2	407.3
MEAN	8.20	20.6	13.4	33.2	78.2	39.4	28.1	48.2	35.0	11.7	14.1	13.6
MAX	63	64	37	118	539	128	82	413	95	17	50	43
MIN	4.8	11	8.2	11	13	19	14	13	14	7.9	7.4	7.4
CFSM	.23	.59	.38	.95	2.23	1.13	.80	1.38	1.00	.33	.40	.39
IN.	.27	.66	.44	1.09	2.33	1.30	.90	1.59	1.12	.39	.47	.43

CAL YR 1970 TOTAL 8,316.7 MEAN 22.8 MAX 190 MIN 4.8 CFSM .65 IN 8.84
WTR YR 1971 TOTAL 10,320.4 MEAN 28.3 MAX 539 MIN 4.8 CFSM .81 IN 10.97

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	1530	5.90	1,220	5-30	0730	5.12	707

02024000 MAURY RIVER NEAR BUENA VISTA, VA.

LOCATION.--Lat 37°45'45", long 79°23'30", Rockbridge County, on right bank 0.5 mile downstream from South River, and 2.8 miles northwest of Buena Vista.

DRAINAGE AREA.--646 sq mi.

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1303. Prior to October 1945, published as North River near Buena Vista.

GAGE.--Water-stage recorder. Datum of gage is 846.58 ft above mean sea level.

AVERAGE DISCHARGE.--33 years, 620 cfs (13.03 inches per year).

EXTREMES.--Current year: Maximum discharge, 17,900 cfs May 31 (gage height, 14.01 ft); minimum, 56 cfs Oct. 6 (gage height, 1.19 ft).

Period of record: Maximum discharge, 105,000 cfs Aug. 20, 1969 (gage height, 31.23 ft, from floodmarks), from rating curve extended above 17,000 cfs on basis of slope-area measurement of peak flow; minimum, 20 cfs Oct. 10, 1941, occurred during filling of a small reservoir 2 miles upstream; unqualified minimum, 37 cfs Sept. 9, 1966; minimum gage height, 1.19 ft Oct. 6, 1970.

Flood of Mar. 18, 1936, reached a stage of about 22 ft, from information by local residents.

REVISIONS.--The maximum discharge for the water year 1970 has been revised to 13,600 cfs Dec. 31, 1969 (gage height, 12.26 ft), superseding figure published in WRD Va. 1970.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 952: 1940-41. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	730	303	446	418	1,150	490	303	3,570	286	223	286
2	62	546	358	534	320	1,060	466	300	2,200	279	205	265
3	62	582	326	582	350	1,470	446	310	1,580	261	296	303
4	60	968	293	604	350	2,350	418	300	1,100	244	338	240
5	58	1,160	265	1,910	573	1,860	398	265	987	230	438	145
6	58	1,210	247	3,090	1,140	1,580	402	254	842	226	358	109
7	58	872	226	1,910	1,040	1,500	564	261	752	251	254	145
8	60	636	212	1,350	1,390	1,510	987	310	685	226	219	196
9	60	510	205	1,050	1,490	1,300	1,830	334	710	223	193	173
10	60	434	199	818	920	1,090	2,110	310	573	289	173	233
11	62	1,010	193	685	782	962	1,760	289	502	258	170	258
12	65	1,830	205	622	824	836	1,510	286	458	247	178	307
13	67	1,520	230	752	4,970	735	1,240	735	446	223	160	414
14	65	938	233	932	6,910	670	1,030	1,530	382	205	148	205
15	65	715	226	1,470	2,760	631	860	1,220	370	187	138	178
16	65	604	237	1,350	1,840	604	740	1,610	818	226	133	158
17	62	482	358	1,110	1,470	577	655	1,880	1,090	209	131	136
18	62	422	354	926	1,200	550	613	1,450	618	178	133	140
19	62	378	358	715	1,100	550	559	1,040	618	173	193	175
20	67	382	342	582	1,320	622	506	902	478	173	163	555
21	128	478	370	577	1,920	613	478	2,230	818	163	131	872
22	165	530	824	555	1,810	564	458	2,020	758	155	124	631
23	128	494	2,000	600	3,750	538	434	1,220	740	145	124	454
24	102	426	1,630	609	2,800	514	418	914	1,290	138	119	370
25	91	362	1,160	542	1,550	490	398	740	866	148	112	296
26	87	330	884	573	1,540	498	378	618	685	148	109	251
27	84	296	690	546	1,420	490	354	486	406	143	114	233
28	82	279	564	426	1,250	510	370	482	354	136	230	216
29	89	258	482	482	------	568	354	675	390	131	158	193
30	181	254	402	542	------	559	322	8,360	430	148	145	187
31	944	------	414	609	------	542	------	10,900	------	173	223	------
TOTAL	3,323	19,636	14,790	27,499	47,687	27,493	21,548	42,534	25,516	6,222	5,833	8,324
MEAN	107	655	477	887	1,703	887	718	1,372	851	201	188	277
MAX	944	1,830	2,000	3,090	6,910	2,350	2,110	10,900	3,570	289	438	872
MIN	58	254	193	426	320	490	322	254	354	131	109	109
CFSM	.17	1.01	.74	1.37	2.64	1.37	1.11	2.12	1.32	.31	.29	.43
IN.	.19	1.13	.85	1.58	2.75	1.58	1.24	2.45	1.47	.36	.34	.48

CAL YR 1970 TOTAL 179,468 MEAN 492 MAX 5,700 MIN 58 CFSM .76 IN 10.33
WTR YR 1971 TOTAL 250,405 MEAN 686 MAX 10,900 MIN 58 CFSM 1.06 IN 14.42

PEAK DISCHARGE (BASE, 6,200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-14	0030	10.34	9,550	5-31	0300	14.01	17,900

02025500 JAMES RIVER AT HOLCOMBS ROCK, VA.

LOCATION.--Lat 37°30'04", long 79°15'46", Bedford County, on right bank at Holcombs Rock, 0.9 mile downstream from Pedlar River, and at mile 263.2.

DRAINAGE AREA.--3,259 sq mi.

PERIOD OF RECORD.--January 1900 to September 1915 (gage heights only), October 1926 to current year. Published as "at Salt Creek" December 1926 to June 1931. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Datum of gage is 548.53 ft above mean sea level. January 1900 to September 1915, nonrecording gage in powerhouse of Owens Illinois Glass Company 1,000 ft upstream at different datum. December 1926 to June 1931, water-stage recorder at site 2 miles downstream at different datum.

AVERAGE DISCHARGE.--45 years (1926-71), 3,444 cfs (14.35 inches per year).

EXTREMES.--Current year: Maximum discharge, 61,600 cfs May 31 (gage height, 22.62 ft); minimum, 78 cfs Oct. 5 (gage height, 2.91 ft); minimum daily, 333 cfs Oct. 5.

Period of record: Maximum discharge, 150,000 cfs Aug. 20, 1969 (gage height, 35.50 ft), from rating curve extended above 73,000 cfs on basis of records for other stations in James River basin; minimum, 71 cfs Oct. 24, 1963; minimum daily, 223 cfs July 28, 1930; minimum gage height, 2.91 ft Oct. 5, 1970.

Flood in March 1913 reached a stage of 31.3 ft, from floodmarks (discharge, 118,000 cfs, from rating curve extended as explained above).

REMARKS.--Records good. Large diurnal fluctuation caused by powerplants above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 972: 1913(M), 1932-33, 1935(M), 1936. WSP 1303: 1928(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	532	9,510	1,560	2,330	3,730	6,600	3,390	1,980	29,300	2,390	1,230	693
2	529	9,660	1,720	2,120	2,430	5,560	3,200	1,880	14,700	2,280	1,770	930
3	529	4,920	1,920	2,180	2,080	6,520	3,080	1,850	9,790	2,150	2,010	930
4	529	6,040	1,810	2,330	2,300	13,700	2,910	1,840	7,240	2,010	2,120	810
5	333	7,600	1,670	3,820	2,540	14,400	2,750	1,820	5,860	1,850	2,210	700
6	441	6,720	1,580	11,200	4,430	5,870	2,670	1,770	5,270	1,630	2,480	690
7	406	6,380	1,470	10,700	8,670	8,220	3,410	1,900	4,780	1,640	2,050	660
8	358	4,620	1,340	7,050	8,410	7,800	7,440	2,370	4,430	1,730	1,820	760
9	447	3,710	1,180	5,410	9,590	7,420	11,500	4,170	4,210	1,630	1,560	630
10	454	3,090	1,170	4,550	7,570	6,240	12,700	4,300	4,050	1,660	1,360	660
11	491	4,530	1,200	3,760	5,320	5,360	10,500	3,610	3,610	2,010	1,090	980
12	488	8,820	1,230	3,520	4,640	4,850	8,010	3,060	3,210	2,330	1,230	1,800
13	510	8,240	1,270	3,210	15,500	4,410	6,460	5,780	3,020	2,170	1,100	3,700
14	555	7,780	1,440	3,660	46,700	4,130	5,430	10,900	2,730	1,970	936	1,950
15	557	6,090	1,410	6,420	28,700	3,530	4,650	9,740	2,570	1,590	936	1,900
16	496	4,620	1,550	7,760	13,900	3,440	4,130	9,340	5,210	1,420	914	2,000
17	383	3,810	2,060	6,480	9,610	3,520	3,850	11,500	6,100	1,460	825	1,250
18	437	3,060	1,970	5,300	7,670	3,450	3,440	9,640	5,090	1,500	834	1,100
19	465	2,690	1,940	4,480	7,010	3,290	3,110	7,200	4,050	1,440	861	1,050
20	475	2,570	1,950	3,470	7,570	3,210	2,960	5,800	3,740	1,340	903	1,050
21	866	2,780	1,980	2,970	12,300	3,280	2,760	5,560	3,370	980	825	1,750
22	991	2,810	2,990	2,960	13,700	3,230	2,630	7,290	3,630	1,030	798	2,600
23	920	2,910	5,970	2,950	17,700	3,050	2,460	5,190	3,520	969	834	3,900
24	814	2,610	11,600	2,970	20,600	2,940	2,360	4,140	3,420	958	708	2,900
25	895	2,340	7,760	3,050	13,000	2,880	2,330	3,610	3,950	843	716	2,400
26	759	2,100	5,680	2,970	9,310	2,910	2,220	3,180	3,840	1,030	678	2,000
27	683	1,920	4,460	3,030	7,710	2,900	2,060	2,910	3,230	789	764	1,800
28	666	1,850	3,740	3,250	7,030	2,930	2,010	2,640	2,720	861	685	1,600
29	641	1,730	3,170	2,660	------	3,110	2,110	3,000	2,420	892	756	1,350
30	1,943	1,600	2,650	2,940	------	3,530	2,050	24,900	2,360	936	837	1,150
31	11,700	------	2,270	3,150	------	3,570	------	55,600	------	1,170	648	------
TOTAL	30,373	132,800	87,750	132,730	259,720	160,250	128,580	218,370	161,420	46,658	36,458	45,693
MEAN	980	4,427	2,831	4,282	10,700	5,169	4,286	7,044	5,381	1,505	1,176	1,523
MAX	11,700	9,510	11,600	11,200	46,700	14,400	12,700	55,600	29,300	2,390	2,480	3,900
MIN	333	1,600	1,170	2,120	2,080	2,880	2,010	1,770	2,360	789	648	630
CFSM	.30	1.36	.87	1.31	3.28	1.59	1.31	2.16	1.65	.46	.36	.47
IN.	.35	1.52	1.00	1.51	3.42	1.83	1.47	2.49	1.84	.53	.42	.52

CAL YR 1970 TOTAL 1,084,523 MEAN 2,971 MAX 33,600 MIN 333 CFSM .91 IN 12.38
WTR YR 1971 TOTAL 1,480,795 MEAN 4,057 MAX 55,600 MIN 333 CFSM 1.24 IN 16.90

PEAK DISCHARGE (BASE, 25,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-14	2130	20.57	51,000	5-31	0930	22.62	61,600

02026000 JAMES RIVER AT BENT CREEK, VA.

LOCATION.--Lat 37°32'10", long 78°49'30", Nelson County, on left bank 300 ft upstream from bridge on U.S. Highway 60 at town of Bent Creek, 150 ft downstream from Bent Creek, 1.3 miles southeast of Gladstone, and at mile 222.9.

DRAINAGE AREA.--3,683 sq mi.

PERIOD OF RECORD.--October 1924 to current year. Monthly discharge only for some periods, published in WSP 1303. Published as "at Bent Creek, near Gladstone" prior to 1926.

GAGE.--Water-stage recorder. Datum of gage is 381.39 ft above mean sea level. Prior to Sept. 12, 1930, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--47 years, 4,048 cfs (14.93 inches per year).

EXTREMES.--Current year: Maximum discharge, 59,200 cfs May 31 (gage height, 16.31 ft); minimum daily, 460 cfs Oct. 7.

Period of record: Maximum discharge, 144,000 cfs Aug. 20, 1969 (gage height, 24.77 ft), from rating curve extended above 89,000 cfs on basis of velocity-area studies and records for other stations in James River basin; minimum, 222 cfs Oct. 13, 14, 1930 (gage height, 2.21 ft); minimum daily, 222 cfs Oct. 13, 1930.

REMARKS.--Records good. Large diurnal fluctuation caused by powerplants above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 742: 1931(m). WSP 972: 1935-36. WSP 1066: 1940. WSP 1203: 1942. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	632	11,000	2,000	2,690	4,350	7,560	4,350	2,150	39,900	2,720	1,990	968
2	704	7,660	1,980	3,130	3,910	7,090	3,860	2,400	18,300	2,730	1,730	1,090
3	644	5,810	2,310	2,510	3,200	7,400	3,510	2,930	12,300	2,540	1,990	1,130
4	609	6,670	2,090	2,770	2,590	12,230	3,910	2,210	9,250	2,300	2,500	1,090
5	598	8,480	2,270	4,830	2,940	15,700	3,280	2,220	7,320	2,260	2,580	1,020
6	565	7,610	1,560	9,110	4,160	11,500	3,470	2,230	6,790	2,170	3,080	1,030
7	460	6,970	1,730	12,300	7,240	9,270	5,650	2,460	5,960	2,070	2,720	852
8	543	6,050	1,820	8,650	8,630	8,310	6,860	2,610	5,620	2,300	2,160	1,150
9	554	5,070	1,510	6,720	9,230	8,360	10,900	3,900	5,590	1,880	2,170	801
10	598	4,190	1,580	5,760	8,650	7,310	13,000	5,360	5,090	3,110	1,650	784
11	632	5,160	1,510	5,190	6,820	6,420	11,500	4,690	4,330	2,180	1,630	1,070
12	632	8,240	1,470	4,140	5,860	5,990	9,210	4,010	3,960	3,230	1,380	2,500
13	598	9,390	1,730	3,980	8,270	5,600	7,590	7,470	3,660	2,470	1,670	4,750
14	598	8,390	1,760	4,330	40,200	5,190	6,740	10,500	3,580	2,330	1,480	2,600
15	716	8,090	1,980	5,570	36,600	4,750	5,830	11,300	3,140	2,220	1,280	2,500
16	680	6,320	1,710	8,090	16,500	4,270	5,230	12,600	4,540	1,830	1,140	2,600
17	766	5,260	2,630	7,390	11,500	4,140	4,700	12,200	7,260	1,730	1,370	1,900
18	587	4,400	2,770	6,400	9,020	4,120	4,370	11,200	6,900	1,730	1,510	1,600
19	576	3,370	2,410	5,670	7,860	4,100	3,960	8,720	5,480	1,800	940	1,400
20	576	3,320	2,530	4,720	7,900	4,240	3,590	7,140	4,550	1,440	1,430	1,300
21	870	3,280	2,550	3,850	10,400	3,980	3,520	6,440	4,100	1,810	1,010	2,200
22	2,040	3,410	3,090	3,520	14,500	4,010	3,190	7,310	4,030	1,240	1,160	3,300
23	1,210	3,590	6,650	3,650	18,600	3,860	3,200	6,990	4,290	1,070	1,090	5,000
24	1,320	3,320	12,800	3,560	21,600	3,590	2,710	5,470	3,990	1,390	1,060	3,500
25	857	3,170	9,180	3,640	15,100	3,550	2,960	4,650	4,560	1,180	1,160	3,000
26	1,040	2,610	7,090	3,570	11,100	3,480	2,820	4,050	4,650	1,240	952	2,400
27	954	2,430	5,710	3,510	8,920	3,600	2,660	3,720	3,960	1,580	1,020	2,200
28	844	2,270	4,810	3,760	7,920	3,500	2,510	3,230	3,090	997	1,440	2,000
29	926	2,270	4,010	3,240	------	4,000	2,640	4,380	2,720	1,500	1,140	1,700
30	1,680	2,000	3,700	3,500	------	3,970	2,620	21,600	2,990	1,460	965	1,500
31	9,670	------	2,890	3,610	------	4,280	------	49,500	------	1,480	1,180	------
TOTAL	33,699	159,800	102,180	153,370	313,370	185,150	150,140	235,540	201,670	59,987	48,578	58,915
MEAN	1,087	5,327	3,296	4,947	11,190	5,973	5,005	7,598	6,722	1,935	1,567	1,964
MAX	9,670	11,000	12,800	12,300	40,200	15,700	13,000	49,500	39,900	3,230	3,080	5,000
MIN	460	2,000	1,470	2,510	2,590	3,480	2,510	2,150	2,720	997	940	784
CFSM	.30	1.45	.89	1.34	3.04	1.62	1.36	2.06	1.83	.53	.43	.53
IN.	.34	1.61	1.03	1.55	3.17	1.87	1.52	2.38	2.04	.61	.49	.60

CAL YR 1970 TOTAL 1,268,028 MEAN 3,474 MAX 53,900 MIN 460 CFSM .94 IN 12.81
WTR YR 1971 TOTAL 1,792,399 MEAN 4,664 MAX 49,500 MIN 460 CFSM 1.27 IN 17.20

PEAK DISCHARGE (BASE, 26,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-15	0245	14.73	48,900	5-31	1800	16.31	59,200

02027000 TYE RIVER NEAR LOVINGSTON, VA.

LOCATION.--Lat 37°42'55", long 78°58'55", Nelson County, on right bank at downstream side of bridge on State Highway 158, 3.5 miles downstream from Hat Creek, 4.8 miles upstream from Piney River, and 6.8 miles southwest of Lovingston.

DRAINAGE AREA.--92.8 sq mi.

PERIOD OF RECORD.--August 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 578.39 ft above mean sea level. Sept. 15, 1969, to Oct. 15, 1970, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--33 years, 145 cfs (21.22 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,180 cfs Oct. 31 (gage height, 8.94 ft, from high-water mark in well); minimum observed, 7.8 cfs Oct. 10 (gage height, 1.06 ft).

Period of record: Maximum discharge, 80,000 cfs Aug. 20, 1969 (gage height, 29.0 ft, from floodmarks), from rating curve extended above 7,600 cfs on basis of slope-area measurement of peak flow; minimum, 0.50 cfs Sept. 10, 11, 1966; minimum gage height, 0.29 ft Oct. 4, 1943.

REMARKS.--Records fair.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 892: 1938. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	688	119	177	57	250	151	102	680	64	46	24
2	8.4	454	106	139	52	230	154	104	525	60	43	36
3	8.4	665	99	119	50	300	147	106	403	56	41	29
4	8.4	653	96	153	55	310	140	98	330	54	48	26
5	8.2	560	90	580	110	276	132	89	282	50	60	25
6	8.0	462	87	462	142	265	258	90	245	60	47	24
7	8.0	405	81	340	139	256	457	98	213	58	41	23
8	8.0	343	80	284	218	234	302	118	195	52	36	23
9	8.0	287	78	245	185	213	327	92	177	53	33	22
10	7.8	284	78	218	125	200	418	83	160	112	32	21
11	8.4	802	74	200	119	190	370	80	150	97	32	96
12	8.8	732	111	180	114	177	314	90	140	72	34	163
13	8.8	540	96	171	800	168	284	483	135	61	30	194
14	8.8	435	78	180	1,200	158	248	381	130	53	28	98
15	10	520	74	177	800	156	226	302	130	48	26	76
16	11	401	134	153	560	147	211	395	200	61	25	64
17	11	336	260	139	390	136	195	333	170	53	25	57
18	11	290	209	128	340	129	182	250	140	45	29	53
19	11	248	185	108	300	177	165	251	130	44	35	57
20	11	330	165	96	300	187	156	231	120	49	32	158
21	232	350	200	108	280	158	151	248	110	42	28	121
22	126	310	233	116	440	156	143	211	105	40	26	110
23	40	278	233	122	800	151	136	190	100	38	25	98
24	29	239	233	111	580	143	132	172	95	38	23	90
25	26	209	215	103	440	136	121	158	90	44	22	80
26	24	188	197	106	380	149	116	143	85	42	21	73
27	23	174	182	75	310	147	110	132	80	39	39	68
28	23	153	171	60	270	158	123	154	75	36	73	66
29	24	136	140	90	------	177	108	467	70	37	36	60
30	850	133	120	116	------	168	102	1,700	66	41	28	56
31	2,100	------	110	85	------	156	------	1,010	------	56	25	------
TOTAL	3,678.4	11,605	4,334	5,341	9,546	5,858	6,079	8,401	5,531	1,655	1,069	2,091
MEAN	119	387	140	172	341	189	203	271	184	53.4	34.5	69.7
MAX	2,100	802	260	580	1,200	310	457	1,700	680	112	73	194
MIN	7.8	133	74	60	50	129	102	80	66	36	21	21
CFSM	1.28	4.17	1.51	1.85	3.67	2.04	2.19	2.92	1.98	.58	.37	.75
IN.	1.47	4.65	1.74	2.14	3.83	2.35	2.44	3.37	2.22	.66	.43	.84

CAL YR 1970 TOTAL 54,089.6 MEAN 148 MAX 2,100 MIN 7.8 CFSM 1.59 IN 21.68
WTR YR 1971 TOTAL 65,188.4 MEAN 179 MAX 2,100 MIN 7.8 CFSM 1.93 IN 26.13

PEAK DISCHARGE (BASE, 1,600 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	UNKNOWN	8.94	4,180	5-30	UNKNOWN	6.30	2,100

NOTE.--NO GAGE-HEIGHT RECORD OCT. 30, 31, FEB. 13 TO MAR. 4, MAY 30, JUNE 10 TO JULY 6.

02027500 PINEY RIVER AT PINEY RIVER, VA.

LOCATION.--Lat 37°42'08" (revised), long 79°01'40", Amherst County, on right bank 20 ft upstream from bridge on State Highway 151, 0.2 mile southwest of Piney River Post Office, 1.7 miles downstream from Indian Creek, and 2.5 miles southeast of Lowesville.

DRAINAGE AREA.--47.6 sq mi.

PERIOD OF RECORD.--July 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 633.58 ft above mean sea level. Prior to May 27, 1969, water-stage recorder, and Nov. 4, 1969, to Feb. 26, 1970, nonrecording gage at site 20 ft downstream from former highway bridge at same datum.

AVERAGE DISCHARGE.--22 years, 85.9 cfs (24.51 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,750 cfs Oct. 31 (gage height, 6.12 ft, from high-water mark in well), from rating curve extended as explained below; minimum daily, 4.6 cfs Oct. 5-11.

Period of record: Maximum discharge, 38,000 cfs Aug. 20, 1969 (gage height, 13.8 ft, from floodmarks), from rating curve extended above 2,000 cfs on basis of slope-area measurement of peak flow; minimum, 1.1 cfs Sept. 13, 1966; minimum gage height, 0.71 ft Oct. 13, 14, 1954.

Flood in June 1949 reached a stage of 9.9 ft, from floodmarks.

REMARKS.--Records fair. Periodic dewatering of upstream quarries adds small amount of inflow. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	625	76	166	56	140	92	56	358	27	20	10
2	5.1	380	70	125	52	135	93	56	280	25	16	10
3	5.1	387	67	112	51	171	92	57	229	23	16	10
4	5.1	416	62	114	51	182	86	53	205	21	15	8.7
5	4.6	348	60	252	68	179	84	52	182	20	21	8.0
6	4.6	280	58	252	84	171	97	52	158	27	18	8.0
7	4.6	236	56	223	92	163	174	53	137	23	17	8.0
8	4.6	211	55	214	137	150	176	58	120	20	14	6.2
9	4.6	196	61	208	142	132	176	53	105	30	15	7.4
10	4.6	196	62	202	118	120	185	51	92	56	11	7.4
11	4.6	401	62	196	105	110	182	51	81	54	10	57
12	5.1	419	72	190	95	101	174	55	76	40	14	77
13	5.1	341	78	188	463	93	160	287	72	30	11	125
14	5.1	284	78	188	484	88	147	287	64	23	11	73
15	5.6	290	76	188	321	86	132	236	67	18	7.4	56
16	5.1	232	104	185	245	81	123	268	88	31	6.2	34
17	5.1	211	190	179	196	74	112	232	74	26	8.7	34
18	5.1	196	190	174	179	73	103	214	66	21	6.2	27
19	5.1	179	188	160	165	86	93	193	61	17	14	48
20	5.1	185	179	142	158	95	90	176	59	25	12	61
21	62	193	188	135	137	88	84	155	54	21	10	67
22	36	188	205	130	190	86	79	135	52	18	9.5	67
23	18	176	205	128	229	83	76	114	48	19	8.7	63
24	13	155	205	123	205	81	72	105	45	18	7.4	61
25	11	137	202	116	188	78	67	95	42	18	7.4	54
26	10	123	196	114	176	84	63	84	39	18	6.8	43
27	9.1	108	190	110	171	83	61	76	36	18	13	39
28	8.6	97	176	100	155	90	64	83	33	17	23	35
29	9.6	88	160	150	------	93	59	182	31	16	13	33
30	330	83	147	90	------	93	58	673	29	19	12	34
31	2,350	------	137	62	------	93	------	484	------	31	12	------
TOTAL	2,956.3	7,361	3,855	4,916	4,713	3,382	3,254	4,726	2,983	770	386.3	1,171.7
MEAN	95.4	245	124	159	168	109	108	152	99.4	24.8	12.5	39.1
MAX	2,350	625	205	252	484	182	185	673	358	56	23	125
MIN	4.6	83	55	62	51	73	58	51	29	16	6.2	6.2
CFSM	2.00	5.15	2.61	3.34	3.53	2.29	2.27	3.19	2.09	.52	.26	.82
IN.	2.31	5.75	3.01	3.84	3.68	2.64	2.54	3.69	2.33	.60	.30	.92

CAL YR 1970 TOTAL 33,240.8 MEAN 91.1 MAX 2,350 MIN 4.6 CFSM 1.91 IN 25.98
WTR YR 1971 TOTAL 40,474.3 MEAN 111 MAX 2,350 MIN 4.6 CFSM 2.33 IN 31.63

PEAK DISCHARGE (BASE, 650 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	UNKNOWN	6.12	3,750	5-30	0500	3.17	799
2-13	2000	3.14	778				

NOTE.--NO GAGE-HEIGHT RECORD OCT. 30 TO NOV. 1.

02027800 BUFFALO RIVER NEAR TYE RIVER, VA.

LOCATION.--Lat 37°36'20", long 78°55'25", Nelson County, on right bank 70 ft downstream from bridge on State Highway 657, 2.1 miles upstream from mouth, and 3.5 miles southeast of town of Tye River.

DRAINAGE AREA.--147 sq mi.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 444.39 ft above mean sea level.

AVERAGE DISCHARGE.--11 years, 132 cfs (12.19 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,570 cfs Oct. 31 (gage height, 9.69 ft, from high-water mark in well), from rating curve extended as explained below; minimum daily, 18 cfs Oct. 6-9.
Period of record: Maximum discharge, 45,000 cfs Aug. 20, 1969 (gage height, 27.95 ft, from floodmark), from rating curve extended above 1,800 cfs on basis of computation of flow over dam at gage height 11.03 ft and slope-area measurement at gage height 27.95 ft; minimum, 3.2 cfs Sept. 8-13, 1966; minimum gage height, 0.28 ft Sept. 9-13, 1964.

REMARKS.--Records fair.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970. Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	425	102	107	95	252	154	115	456	93	77	38
2	21	260	96	130	88	250	159	110	349	94	75	40
3	22	407	92	123	86	338	164	108	294	112	77	40
4	20	498	95	116	84	456	160	106	250	91	66	39
5	19	479	92	450	92	316	164	102	224	85	64	39
6	18	246	94	434	95	274	204	100	212	87	64	37
7	18	199	90	246	215	250	572	100	190	98	62	36
8	18	169	91	184	435	224	430	120	216	89	58	36
9	18	151	92	168	430	204	284	110	212	87	55	35
10	19	143	92	153	222	185	240	106	164	138	54	35
11	19	749	92	139	224	170	214	102	150	93	52	65
12	20	444	99	132	174	160	202	100	146	111	55	93
13	20	273	109	127	1,010	150	194	594	146	87	50	112
14	21	206	96	134	974	145	280	410	136	80	48	61
15	23	444	95	141	443	140	260	264	134	75	46	52
16	23	246	104	129	338	140	250	655	222	98	45	49
17	24	192	218	126	284	130	230	349	186	85	45	49
18	22	166	137	125	254	120	215	264	150	74	54	48
19	23	147	127	119	240	180	200	224	140	72	58	49
20	24	147	126	110	232	238	190	202	129	74	48	77
21	45	162	130	110	222	150	180	194	127	67	44	69
22	150	143	169	110	256	170	170	180	121	64	42	66
23	100	136	143	110	336	160	160	165	125	64	42	62
24	70	130	137	109	370	140	150	155	123	62	39	62
25	45	125	129	111	310	130	145	148	114	62	37	56
26	40	122	127	111	285	150	140	140	107	69	36	54
27	35	118	126	95	275	140	135	130	103	67	46	54
28	32	114	122	80	265	160	170	154	100	60	75	54
29	40	110	120	82	------	180	140	626	96	64	45	54
30	500	106	115	105	------	200	120	2,900	96	82	41	50
31	2,300	------	110	105	------	158	------	770	------	80	39	------
TOTAL	3,770	7,257	3,567	4,521	8,724	6,100	6,279	9,803	5,218	2,569	1,640	1,611
MEAN	122	242	115	146	312	197	209	316	174	82.9	52.9	53.7
MAX	2,300	749	218	450	1,010	456	572	2,900	456	138	77	112
MIN	18	106	90	80	82	120	120	100	96	60	36	35
CFSM	.83	1.65	.78	.99	2.12	1.34	1.42	2.15	1.18	.56	.36	.37
IN.	.95	1.84	.90	1.14	2.21	1.54	1.59	2.48	1.32	.65	.42	.41

CAL YR 1970 TOTAL 48,398 MEAN 133 MAX 2,300 MIN 17 CFSM .90 IN 12.25
WTR YR 1971 TOTAL 61,059 MEAN 167 MAX 2,900 MIN 18 CFSM 1.14 IN 15.45

PEAK DISCHARGE (BASE, 1,400 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	UNKNOWN	9.69	4,570	5-30	0800	9.59	4,460
2-13	2200	7.79	2,640				

NOTE.--NO GAGE-HEIGHT RECORD OCT. 21 TO NOV. 2.

02028500 ROCKFISH RIVER NEAR GREENFIELD, VA.

LOCATION.--Lat 37°52'10", long 78°49'25", Nelson County, on left bank 50 ft downstream from bridge on State Highway 634, 2.8 miles downstream from confluence of North and South Forks, and 4.1 miles south of Greenfield.

DRAINAGE AREA.--94.6 sq mi.

PERIOD OF RECORD.--April 1943 to current year.

GAGE.--Water-stage recorder. Datum of gage is 530.29 ft above mean sea level. Prior to Aug. 21, 1943, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--28 years, 129 cfs (18.52 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,560 cfs May 30 (gage height, 9.22 ft); minimum daily, 6.3 cfs Oct. 4-8.

Period of record: Maximum discharge, 70,000 cfs Aug. 20, 1969 (gage height, 31.2 ft, from floodmarks), from rating curve extended above 8,500 cfs on basis of slope-area measurements at gage heights 17.2, 23.4, and 31.2 ft and peak runoff comparison with nearby stations; minimum, 0.20 cfs Sept. 8-12, 1966.

Flood of Oct. 15, 1942, reached a stage of 23.4 ft, from floodmarks (discharge, about 30,000 cfs).

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	600	120	108	68	182	151	91	820	76	40	25
2	6.7	400	111	111	60	180	151	90	631	74	40	35
3	6.6	674	101	98	58	[illegible]	146	90	494	68	62	30
4	6.3	637	94	111	62	[illegible]	136	86	474	64	180	27
5	6.3	510	90	384	95	[illegible]	133	83	365	63	123	26
6	6.3	339	67	384	102	226	272	83	303	[illegible]	77	25
7	6.3	270	83	281	116	211	688	87	266	94	64	24
8	6.3	226	81	222	197	191	370	98	238	61	54	23
9	6.4	193	81	196	171	175	339	83	212	60	45	20
10	6.5	223	78	175	128	164	356	79	192	82	40	18
11	6.6	1,320	76	162	116	155	335	76	174	77	36	53
12	7.0	905	97	153	112	144	292	83	170	61	39	193
13	7.0	492	91	146	838	139	259	455	158	53	31	218
14	6.9	370	82	143	723	131	226	292	156	46	27	101
15	7.3	527	78	143	398	131	203	224	156	42	25	78
16	7.2	370	110	131	292	123	185	342	257	49	24	66
17	7.0	292	196	126	244	116	175	281	192	42	24	82
18	7.0	244	153	123	211	111	160	226	162	33	30	63
19	7.0	211	138	114	193	167	144	193	147	40	40	64
20	7.1	310	126	110	191	193	136	199	136	42	32	182
21	70	316	136	105	176	166	130	281	128	33	26	125
22	28	266	176	105	237	158	123	216	123	32	25	109
23	11	230	176	108	384	155	118	189	120	33	23	95
24	9.3	196	166	101	304	146	114	167	114	35	22	86
25	8.6	176	151	99	266	141	108	157	104	40	21	77
26	8.3	160	141	101	237	151	102	143	96	39	28	73
27	8.2	146	131	86	230	151	99	130	92	38	50	68
28	8.0	136	120	81	198	167	105	136	86	38	93	64
29	6.7	126	112	86	------	175	97	839	83	36	42	60
30	336	136	108	94	------	164	94	3,690	82	40	30	57
31	1,700	------	106	84	------	157	------	1,340	------	53	28	------
TOTAL	2,330.9	11,151	3,596	4,471	6,407	5,278	5,951	10,529	6,731	1,632	1,425	2,167
MEAN	75.2	372	116	144	229	170	198	340	224	52.6	46.0	72.2
MAX	1,700	1,320	196	384	838	292	688	3,690	820	98	180	218
MIN	6.3	126	76	81	58	111	94	76	82	32	21	18
CFSM	.79	3.93	1.23	1.52	2.42	1.80	2.09	3.59	2.37	.56	.49	.76
IN.	.92	4.38	1.41	1.76	2.52	2.08	2.34	4.14	2.65	.64	.56	.85

CAL YR 1970 TOTAL 48,702.7 MEAN 133 MAX 1,700 MIN 6.3 CFSM 1.41 IN 19.15
WTR YR 1971 TOTAL 61,668.9 MEAN 169 MAX 3,690 MIN 6.3 CFSM 1.79 IN 24.25

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	0330	7.70	3,790	2-13	2030	5.70	1,790
11-11	1600	5.86	1,920	5-30	0930	9.22	5,560

02029000 JAMES RIVER AT SCOTTSVILLE, VA.

LOCATION.--Lat 37°47'50", long 78°29'30", Albemarle County, on left bank 1,200 ft downstream from bridge on State Highway 20 at Scottsville, 6.8 miles upstream from Hardware River, and at mile 184.6.

DRAINAGE AREA.--4,584 sq mi.

PERIOD OF RECORD.--October 1924 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Datum of gage is 253.18 ft above mean sea level. Prior to Nov. 28, 1928, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--47 years, 4,908 cfs (14.54 inches per year).

EXTREMES.--Current year: Maximum discharge, 64,400 cfs June 1 (gage height, 19.12 ft); minimum daily, 514 cfs Oct. 9.

Period of record: Maximum discharge, 188,000 cfs Aug. 20, 1969 (gage height, 30.00 ft, from floodmarks); minimum daily, 300 cfs Sept. 13, 1966.

Flood in October 1870 reached a stage of 30.7 ft and flood in November 1877 reached a stage of 27.9 ft (discharge, about 160,000 cfs), from information by local resident. Flood in March 1913 reached a stage of 25.16 ft from floodmarks (discharge, 121,000 cfs).

REMARKS.--Records good. Large diurnal fluctuation caused by powerplants above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 727: 1931(m). WSP 972: 1936(M), 1940(M). WRD Va. 1970: Drainage area, 1969.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	606	15,200	2,350	3,210	3,620	8,970	4,880	2,970	56,800	2,960	1,940	1,130
2	598	11,100	2,250	3,170	4,480	8,480	4,930	2,700	27,000	2,960	1,870	992
3	625	8,090	2,220	3,190	3,320	8,860	4,540	2,730	16,100	2,820	2,070	1,040
4	615	7,970	2,580	3,010	3,100	13,200	4,230	2,940	12,000	2,760	2,530	1,110
5	586	11,000	2,860	5,270	3,020	18,200	4,130	2,520	9,590	2,440	3,000	1,060
6	574	9,880	2,350	10,300	3,630	15,100	4,050	2,500	8,520	2,300	2,730	1,010
7	562	8,450	2,150	15,000	6,010	11,500	10,100	2,610	7,420	2,470	3,130	1,080
8	538	7,490	2,250	11,600	12,900	10,100	11,100	2,900	7,090	2,120	2,520	923
9	514	6,250	1,850	8,670	13,300	9,650	11,800	3,120	6,770	2,330	2,110	1,150
10	542	5,070	1,900	7,100	11,400	9,020	14,700	5,010	5,920	2,460	2,130	866
11	566	7,800	1,850	6,350	8,720	7,890	14,300	5,240	5,390	3,350	1,740	1,030
12	570	10,800	1,800	5,230	6,860	7,030	11,900	4,520	4,690	2,580	1,370	2,870
13	606	12,200	2,100	5,170	9,070	6,530	9,810	8,600	4,450	3,210	1,640	5,200
14	578	10,300	1,800	4,650	37,200	6,220	8,380	12,400	4,230	2,700	1,570	2,940
15	574	11,400	1,890	5,550	49,300	5,550	7,500	13,500	3,750	2,430	1,250	2,780
16	582	9,170	2,230	7,750	23,300	5,310	6,500	16,100	4,760	2,120	1,170	2,950
17	635	7,150	3,380	8,870	14,600	4,710	5,930	15,100	7,740	1,940	1,130	2,020
18	620	5,710	3,710	7,470	11,200	4,760	5,330	13,800	8,020	1,950	1,230	1,740
19	598	4,670	3,190	6,350	9,470	4,850	4,950	11,200	6,970	1,770	1,610	1,520
20	546	4,180	2,890	5,750	9,000	5,930	4,480	8,950	5,500	1,820	1,100	1,470
21	610	4,370	2,910	4,320	9,730	5,090	4,290	8,490	4,800	1,780	1,440	2,420
22	2,070	4,250	3,710	4,100	15,100	4,840	4,000	7,480	4,200	1,560	1,020	3,650
23	1,660	4,120	4,600	4,030	23,900	4,740	3,790	8,700	4,760	1,340	1,160	5,540
24	1,160	4,230	12,200	4,060	24,400	4,410	3,690	7,080	4,400	1,180	1,120	4,020
25	1,160	3,720	11,400	4,030	20,400	4,160	3,320	5,700	4,360	1,450	975	3,370
26	813	3,360	8,540	3,950	14,000	4,300	3,270	4,950	5,090	1,190	1,030	2,560
27	923	2,970	6,680	3,890	11,300	4,350	3,220	4,240	4,530	1,360	917	2,490
28	900	2,850	5,810	3,510	9,730	4,510	3,240	4,240	3,680	1,650	1,150	2,270
29	813	2,620	4,770	4,140	------	4,820	2,990	7,030	3,200	1,340	1,690	1,890
30	1,280	2,560	4,160	3,520	------	4,690	2,970	33,600	2,910	1,630	1,180	1,680
31	14,600	------	3,410	3,940	------	5,140	------	46,900	------	1,720	1,060	------
TOTAL	37,624	208,930	115,790	177,150	372,060	222,910	188,220	277,820	254,640	65,690	50,582	64,771
MEAN	1,214	6,964	3,735	5,715	13,290	7,191	6,274	8,962	8,488	2,119	1,632	2,159
MAX	14,600	15,200	12,200	15,000	49,300	18,200	14,700	46,900	56,800	3,350	3,130	5,540
MIN	514	2,560	1,800	3,010	3,020	4,160	2,970	2,500	2,910	1,180	917	866
CFSM	.26	1.52	.81	1.25	2.90	1.57	1.37	1.96	1.85	.46	.36	.47
IN.	.31	1.70	.94	1.44	3.02	1.81	1.53	2.25	2.07	.53	.41	.53

CAL YR 1970 TOTAL 1,496,816 MEAN 4,101 MAX 56,200 MIN 514 CFSM .89 IN 12.15
WTR YR 1971 TOTAL 2,036,187 MEAN 5,579 MAX 56,800 MIN 514 CFSM 1.22 IN 16.52

PEAK DISCHARGE (BASE, 27,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-15	1200	17.44	53,500	6-1	0430	19.12	64,400
2-23	1030	12.29	27,100				

02030000 HARDWARE RIVER BELOW BRIERY RUN, NEAR SCOTTSVILLE, VA.

LOCATION.--Lat 37°48'45", long 78°27'20", Fluvanna County, on left bank 75 ft upstream from bridge on State Highway 637, 0.8 mile downstream from Briery Run, 2.4 miles northeast of Scottsville, and 10.8 miles upstream from mouth.

DRAINAGE AREA.--116 sq mi.

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Datum of gage is 294.96 ft above mean sea level.

AVERAGE DISCHARGE.--33 years, 117 cfs (13.70 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,680 cfs May 30 (gage height, 14.19 ft); minimum, 14 cfs Oct. 5 (gage height, 1.77 ft).

Period of record: Maximum discharge, 52,000 cfs Aug. 20, 1969 (gage height, 31.0 ft, from floodmarks), from rating curve extended above 18,000 cfs on basis of slope-area measurements at gage heights 23.8 and 31.0 ft; minimum, 0.10 cfs Sept. 5-8, 1966; minimum gage height, 0.81 ft Sept. 8, 1966.

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 952: 1949(M). WSP 1002: 1940, 1943. WSP 1032: 1940, 1944.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	253	87	69	75	145	148	96	473	98	63	35
2	18	138	82	130	75	148	145	96	359	95	65	40
3	17	210	77	116	78	373	143	100	302	93	59	39
4	16	234	76	112	80	587	130	93	292	84	85	36
5	14	297	69	359	90	302	127	90	254	80	190	36
6	15	151	71	418	143	254	189	90	222	82	79	37
7	15	114	66	245	203	218	1,410	92	203	95	63	35
8	15	97	65	190	575	192	794	114	205	80	55	33
9	16	83	66	165	473	175	378	93	179	76	50	33
10	16	82	68	147	218	168	264	84	165	121	47	32
11	16	690	66	145	170	163	222	79	156	224	45	136
12	18	511	92	148	152	156	201	80	161	120	49	212
13	18	264	118	156	800	152	186	668	198	88	43	264
14	18	186	85	161	1,410	147	170	359	181	82	41	102
15	18	426	76	188	416	145	157	184	220	74	40	71
16	20	254	104	165	283	147	145	551	368	76	40	58
17	18	183	330	145	230	132	147	302	292	72	40	65
18	17	156	172	136	203	125	143	198	207	62	44	55
19	18	138	134	116	186	201	134	161	179	62	56	53
20	18	132	116	110	181	264	129	148	163	71	46	52
21	32	148	130	105	170	177	127	321	152	59	40	50
22	178	121	207	109	224	157	123	175	147	56	40	52
23	52	112	192	116	685	147	116	145	141	55	40	50
24	36	98	172	107	274	136	116	132	139	53	36	49
25	32	92	141	107	207	129	111	125	125	55	35	46
26	29	90	129	112	184	145	107	116	116	56	34	45
27	27	88	114	98	186	156	102	105	112	59	58	45
28	27	87	103	96	159	215	111	116	109	68	92	44
29	28	84	95	88	------	230	105	1,000	107	59	47	43
30	164	92	88	80	------	184	98	4,080	112	69	40	42
31	990	------	75	88	------	159	------	1,180	------	69	39	------
TOTAL	1,933	5,611	3,466	4,527	8,134	6,029	6,478	11,173	6,039	2,493	1,701	1,893
MEAN	62.4	187	112	146	291	194	216	360	201	80.4	54.9	63.1
MAX	990	690	330	418	1,410	587	1,410	4,080	473	224	190	264
MIN	14	82	65	69	75	125	98	79	107	53	34	32
CFSM	.54	1.61	.97	1.26	2.51	1.67	1.86	3.10	1.73	.69	.47	.54
IN.	.62	1.80	1.11	1.45	2.61	1.93	2.08	3.58	1.94	.80	.55	.61

CAL YR 1970 TOTAL 41,614 MEAN 114 MAX 990 MIN 14 CFSM .98 IN 13.35
WTR YR 1971 TOTAL 59,477 MEAN 163 MAX 4,080 MIN 14 CFSM 1.41 IN 19.07

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-14	0200	11.56	2,480	5-30	0430	14.19	4,680
4- 7	1730	10.39	1,760				

02030500 SLATE RIVER NEAR ARVONIA, VA.

LOCATION.--Lat 37°42'10", long 78°22'40", Buckingham County, on left bank 100 ft upstream from Bumpers Bridge on State Highway 676, 1.8 miles northwest of Arvonia, 2.9 miles upstream from Hunts Creek, and 3.8 miles upstream from mouth.

DRAINAGE AREA.--226 sq mi.

PERIOD OF RECORD.--April 1926 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Datum of gage is 238.78 ft above mean sea level (levels by Corps of Engineers). Prior to Feb. 15, 1936, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--45 years, 212 cfs (12.74 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,930 cfs May 31 (gage height, 13.66 ft), from rating curve extended as explained below; minimum, 7.9 cfs Oct. 10 (gage height, 1.67 ft).

Period of record: Maximum discharge, 13,600 cfs Sept. 6, 1935 (gage height, 22.18 ft, from floodmarks), from rating curve extended above 5,200 cfs on basis of velocity-area studies; minimum, 2.0 cfs Sept. 28 to Oct. 2, 1930; minimum gage height, 1.35 ft Sept. 12, 1966.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 972: 1928-29, 1932, 1933-34(M), 1935. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	224	77	99	90	197	180	116	687	112	89	80
2	13	89	74	142	82	181	172	115	377	101	101	80
3	13	76	71	118	76	563	177	116	298	97	99	79
4	13	88	72	110	66	1,880	162	118	230	88	186	74
5	11	177	65	1,140	108	630	149	113	224	84	726	71
6	9.5	121	63	1,520	156	361	241	110	186	84	176	79
7	9.8	87	63	519	385	283	1,880	114	166	107	111	74
8	9.5	66	60	302	1,650	232	1,420	177	290	101	88	66
9	9.6	59	63	219	1,350	197	486	167	228	96	76	63
10	8.2	63	65	185	437	180	318	125	165	85	71	60
11	9.1	812	66	174	260	176	250	111	145	158	67	62
12	9.1	636	79	173	229	165	218	107	136	125	120	581
13	9.4	233	120	168	1,010	156	203	2,930	156	94	84	620
14	12	154	101	159	1,730	151	186	3,380	144	82	67	211
15	15	707	81	199	493	151	168	528	151	75	62	129
16	17	420	104	161	305	184	161	2,570	403	72	59	101
17	21	185	399	139	232	162	157	1,920	476	72	58	94
18	18	132	235	132	158	139	153	462	252	69	74	87
19	17	111	147	119	177	185	146	297	192	63	124	82
20	17	100	123	106	170	461	141	408	166	64	93	83
21	30	107	130	105	168	273	139	774	148	64	72	81
22	138	97	302	105	636	210	138	285	136	59	66	80
23	98	89	239	120	3,490	183	132	208	143	56	64	82
24	47	92	184	125	1,370	162	132	179	179	55	62	81
25	36	75	147	116	397	149	134	167	144	54	56	77
26	31	73	126	117	327	159	123	158	124	55	54	72
27	29	74	109	107	270	192	120	142	117	67	379	71
28	28	75	94	92	243	297	127	157	110	79	780	72
29	28	73	93	98	------	391	139	2,120	103	83	181	70
30	61	75	93	103	------	271	123	5,250	112	136	107	68
31	517	------	99	109	------	207	------	4,840	------	122	87	------
TOTAL	1,298.2	5,370	3,744	7,081	16,065	9,128	8,275	28,264	6,388	2,649	4,439	3,530
MEAN	41.9	179	121	229	574	294	276	912	213	85.5	143	118
MAX	517	812	399	1,520	3,490	1,880	1,880	5,250	687	158	780	620
MIN	8.2	59	60	92	76	139	120	107	103	54	54	60
CFSM	.19	.79	.54	1.01	2.54	1.30	1.22	4.04	.94	.38	.63	.52
IN.	.21	.88	.62	1.17	2.64	1.50	1.36	4.65	1.05	.44	.73	.58

CAL YR 1970 TOTAL 48,831.2 MEAN 134 MAX 1,570 MIN 8.2 CFSM .59 IN 8.04
WTR YR 1971 TOTAL 96,231.2 MEAN 264 MAX 5,250 MIN 8.2 CFSM 1.17 IN 15.84

PEAK DISCHARGE (BASE, 2,100 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1- 5	2200	8.41	2,320	4- 7	2230	8.38	2,300
2-14	0130	8.95	2,640	5-14	1300	11.07	3,960
2-23	0500	10.85	3,810	5-16	1330	10.05	3,300
3- 4	0930	8.30	2,260	5-31	0830	13.66	5,930

02032680 NORTH FORK RIVANNA RIVER NEAR PROFFIT, VA.

LOCATION.--Lat 38°05'16", long 78°24'44", Albemarle County, on left bank 50 ft downstream from bridge on State Highway 649, 1.9 miles southeast of Proffit, and 2.2 miles upstream from confluence of North and South Forks.

DRAINAGE AREA.--176 sq mi.

PERIOD OF RECORD.--April 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 330 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 5,000 cfs May 30 (gage height, 16.67 ft); minimum, 16 cfs Oct. 4-7; minimum gage height, 2.47 ft Oct. 4-6.

Period of record: Maximum discharge, 5,000 cfs May 30, 1971 (gage height, 16.67 ft); minimum, 16 cfs Sept. 26, 27, Oct. 4-7, 1970; minimum gage height, 2.47 ft Sept. 26, 27, Oct. 4-6, 1970.

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	725	105	320	122	252	134	93	953	140	92	58
2	17	366	100	310	115	245	134	93	631	291	81	62
3	17	616	95	210	105	497	140	94	493	136	188	62
4	16	581	94	180	102	841	125	90	398	106	517	57
5	16	564	86	484	128	485	119	86	499	94	847	58
6	16	322	87	755	185	385	167	87	294	159	223	63
7	16	235	83	473	254	338	916	87	355	253	148	66
8	17	183	79	340	768	290	520	112	404	121	109	59
9	18	149	79	275	703	256	360	96	339	100	90	53
10	18	138	81	236	321	235	337	84	248	157	78	52
11	19	919	79	211	245	222	307	78	180	230	81	75
12	21	957	102	198	211	204	290	80	198	369	216	186
13	23	578	141	193	1,630	192	261	628	360	205	98	460
14	23	390	105	205	2,300	181	234	415	523	155	76	321
15	24	722	93	253	815	173	209	256	449	106	66	196
16	55	475	124	231	540	171	196	683	632	100	60	131
17	29	337	454	201	397	154	184	481	487	86	58	200
18	22	264	262	189	330	160	181	331	350	76	67	154
19	20	218	209	165	285	323	164	249	273	83	78	128
20	20	218	179	150	274	269	155	245	228	88	68	181
21	61	359	177	140	259	218	152	557	207	74	56	227
22	303	261	493	140	317	186	146	336	199	66	54	188
23	92	228	497	171	862	148	135	253	176	63	55	158
24	57	187	388	162	539	137	118	214	224	61	47	138
25	46	159	296	153	410	129	110	190	156	61	44	114
26	41	145	251	159	339	140	105	167	139	61	42	113
27	38	135	208	136	341	148	100	162	128	65	81	122
28	36	126	178	130	287	177	105	191	116	82	140	105
29	35	116	165	135	------	170	105	489	117	75	77	97
30	277	115	167	140	------	157	95	3,540	170	187	63	89
31	2,580	------	143	132	------	141	------	2,470	------	112	60	------
TOTAL	3,990	10,788	5,600	7,177	13,184	7,632	6,304	12,937	9,926	3,962	3,960	3,973
MEAN	129	360	181	232	471	246	210	417	331	128	128	132
MAX	2,580	957	497	755	2,300	841	916	3,540	953	369	847	460
MIN	16	115	79	130	102	129	95	78	116	61	42	52
CFSM	.73	2.05	1.03	1.32	2.68	1.40	1.19	2.37	1.88	.73	.73	.75
IN.	.84	2.28	1.18	1.52	2.79	1.61	1.33	2.73	2.10	.84	.84	.84

WTR YR 1971 TOTAL 89,433 MEAN 245 MAX 3,540 MIN 16 CFSM 1.39 IN 18.90

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	1400	13.33	3,560	5-30	1900	16.67	5,000
11-11	2100	9.26	1,820	8- 5	0100	11.18	2,280
2-14	0230	14.30	4,020				

02034000 RIVANNA RIVER AT PALMYRA, VA.

LOCATION.--Lat 37°51'28", long 78°15'58", Fluvanna County, on left bank 10 ft upstream from bridge on U.S. Highway 15 at Palmyra, 0.5 mile upstream from Cunningham Creek, and 15 miles upstream from mouth.

DRAINAGE AREA.--664 sq mi.

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Datum of gage is 210.39 ft above mean sea level. Prior to Oct. 24, 1942, water-stage recorder at site 200 ft downstream at same datum. Oct. 24, 1942, to Dec. 18, 1947, nonrecording gage 10 ft downstream at same datum.

AVERAGE DISCHARGE.--38 years, 669 cfs (13.68 inches per year).

EXTREMES.--Current year: Maximum discharge, 21,000 cfs May 31 (gage height, 23.39 ft); minimum, 58 cfs Oct. 7 (gage height, 2.57 ft).

Period of record: Maximum discharge, 98,800 cfs Aug. 20, 1969 (gage height, 39.85 ft); minimum, 5.2 cfs Sept. 9-11, 1966 (gage height, 2.13 ft).

REMARKS.--Records good. Some diurnal fluctuation mostly at medium flow by city of Charlottesville reservoir on South Fork Rivanna River. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 802: 1936(M). WSP 852: 1937. WSP 892: 1934-35. WSP 1303: 1945-46(M). WSP 1503: 1956. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	3,830	413	484	409	987	558	422	4,760	500	342	218
2	69	1,600	386	567	352	930	537	422	2,700	670	310	219
3	69	1,460	367	505	340	1,580	561	430	2,150	507	434	221
4	66	2,110	354	485	400	3,400	513	418	3,760	416	422	213
5	62	2,750	339	1,070	485	2,050	481	400	3,300	375	2,180	204
6	61	1,380	322	2,650	603	1,520	508	400	1,980	364	838	206
7	61	974	302	1,880	685	1,310	4,040	409	1,840	710	482	205
8	63	711	281	1,330	2,530	1,110	3,480	474	2,690	488	375	205
9	63	575	273	1,080	3,020	935	1,990	486	1,550	369	315	199
10	63	491	279	906	1,430	819	1,700	417	1,180	428	280	195
11	63	2,220	277	802	1,020	770	1,410	383	926	1,010	261	643
12	63	4,880	300	763	864	710	1,520	376	816	1,110	369	719
13	65	2,520	430	779	3,050	662	874	2,910	970	602	340	2,030
14	66	1,630	389	779	8,830	627	969	2,270	1,490	470	264	1,110
15	69	2,130	330	919	3,320	596	854	1,220	1,020	386	242	575
16	76	1,890	323	897	2,150	600	750	2,550	1,550	347	229	397
17	101	1,290	1,210	752	1,590	548	729	2,450	1,830	342	222	351
18	81	1,020	1,010	701	1,280	504	702	1,470	1,340	300	236	446
19	71	826	754	614	1,110	685	648	1,110	1,100	280	272	344
20	71	718	638	510	999	1,160	599	847	926	320	325	316
21	90	1,050	578	510	955	780	578	2,660	871	300	246	438
22	644	969	1,020	535	1,030	640	570	1,880	794	270	229	439
23	494	815	1,680	545	3,380	573	533	1,210	761	252	225	383
24	274	693	1,370	578	2,230	524	510	935	720	242	215	344
25	200	575	1,110	549	1,610	489	488	780	610	237	200	305
26	165	509	905	548	1,340	513	467	670	542	242	196	275
27	148	481	704	521	1,270	572	452	556	514	252	295	289
28	137	456	630	420	1,169	724	452	571	482	325	558	281
29	129	430	546	410	------	827	478	2,600	458	280	343	264
30	310	418	491	450	------	699	441	16,900	494	404	272	250
31	5,510	------	498	491	------	597	------	17,700	------	398	231	------
TOTAL	9,473	41,401	18,508	24,030	47,482	28,441	28,392	66,326	44,124	13,196	11,748	12,284
MEAN	306	1,380	597	775	1,696	917	946	2,140	1,471	426	379	409
MAX	5,510	4,880	1,680	2,650	8,830	3,400	4,040	17,700	4,760	1,110	2,180	2,030
MIN	61	418	273	410	340	489	441	376	458	237	196	195
CFSM	.46	2.08	.90	1.17	2.55	1.38	1.42	3.22	2.22	.64	.57	.62
IN.	.53	2.32	1.04	1.35	2.66	1.59	1.59	3.72	2.47	.74	.66	.69

CAL YR 1970 TOTAL 235,705 MEAN 646 MAX 5,510 MIN 61 CFSM .97 IN 13.21
WTR YR 1971 TOTAL 345,405 MEAN 946 MAX 17,700 MIN 61 CFSM 1.42 IN 19.35

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	2330	13.15	7,370	4- 7	1830	11.44	6,110
11-12	0430	11.74	6,270	5-31	0600	23.39	21,000
2-14	0730	16.77	10,900				

02034500 WILLIS RIVER AT FLANAGAN MILLS, VA.

LOCATION.--Lat 37°40'00", long 78°10'00", Cumberland County, on left bank 15 ft upstream from bridge on State Highway 690, 0.4 mile east of Flanagan Mills, 6.9 miles upstream from mouth, and 7.7 miles downstream from Reynolds Creek.

DRAINAGE AREA.--262 sq mi.

PERIOD OF RECORD.--April 1926 to current year.

GAGE.--Water-stage recorder. Datum of gage is 178.98 ft above mean sea level (levels by Corps of Engineers). Prior to Jan. 3, 1935, nonrecording gage at site 1,300 ft upstream at same datum.

AVERAGE DISCHARGE.--45 years, 232 cfs (12.03 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,760 cfs May 31 (gage height, 18.64 ft); minimum, 1.9 cfs Oct. 13-15 (gage height, 2.33 ft).
Period of record: Maximum discharge, 9,580 cfs Apr. 27, 1937 (gage height, 23.86 ft, from floodmarks), from rating curve extended above 5,800 cfs on basis of velocity-area studies, with backwater correction; minimum, 1.5 cfs Sept. 13, 14, 1966 (gage height, 2.26 ft).

REMARKS.--Records good. Complete regulation of flow from Trice Lake, 0.4 mile upstream (total capacity, about 1,100 acre-ft), tributary to Willis River, slightly affects flow at gage. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 872: 1936-37. WSP 892: 1928-29, 1932-34(M). WSP 972: 1937, 1940. WSP 1203: 1929. WSP 1303: 1928-30(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	101	59	95	110	256	235	107	4,780	95	85	102
2	3.6	117	59	110	100	214	194	102	2,300	99	78	80
3	3.2	74	59	106	95	354	194	101	1,270	100	64	70
4	3.0	56	57	108	90	775	181	97	450	86	62	64
5	3.0	71	54	378	94	780	169	95	312	76	95	59
6	3.0	80	52	820	122	745	239	94	263	69	101	62
7	2.8	71	49	840	308	414	940	94	228	69	92	57
8	2.8	59	47	880	1,020	298	1,140	205	249	69	67	59
9	2.6	46	45	418	1,260	242	1,180	242	194	68	53	54
10	2.4	44	46	249	1,400	200	1,060	228	181	64	48	50
11	2.4	110	47	207	1,470	198	404	158	152	85	44	48
12	2.1	290	51	188	854	175	291	126	131	147	87	401
13	1.9	386	65	181	617	169	242	372	147	112	74	800
14	1.9	251	70	169	1,200	152	221	680	168	80	59	880
15	3.2	383	70	181	1,240	147	194	700	216	65	49	644
16	2.2	480	69	175	1,310	152	175	1,340	609	58	42	194
17	3.0	458	181	158	736	164	164	1,450	560	54	38	126
18	13	207	236	142	320	152	158	1,630	365	51	40	99
19	26	130	213	126	256	147	152	1,540	249	48	48	86
20	24	99	147	115	228	254	142	546	188	47	57	80
21	29	90	123	113	207	335	136	1,250	164	45	59	74
22	39	84	186	111	208	277	131	870	360	44	50	71
23	54	81	234	113	662	207	126	393	200	42	46	68
24	67	73	242	122	720	175	126	242	238	41	50	68
25	56	65	191	126	700	152	120	188	181	40	53	66
26	39	61	164	131	402	147	114	164	152	39	46	64
27	27	59	137	124	305	169	107	142	122	40	128	62
28	20	58	117	97	284	249	107	142	106	51	559	59
29	20	58	100	91	------	426	113	1,010	98	50	586	57
30	22	59	90	97	------	442	113	3,380	97	55	610	65
31	55	------	85	107	------	328	------	5,310	------	68	195	------
TOTAL	537.7	4,201	3,345	6,078	16,358	8,885	8,868	22,998	14,730	2,057	3,665	4,669
MEAN	17.3	140	108	222	584	287	296	742	491	66.4	118	156
MAX	67	480	242	880	1,470	780	1,180	5,310	4,780	147	610	880
MIN	1.9	44	45	91	90	147	107	94	97	39	38	48
CFSM	.07	.53	.41	.85	2.23	1.10	1.13	2.83	1.87	.25	.45	.60
IN.	.08	.60	.47	.98	2.32	1.26	1.26	3.27	2.09	.29	.52	.66

CAL YR 1970 TOTAL 50,169.9 MEAN 137 MAX 970 MIN 1.9 CFSM .52 IN 7.12
WTR YR 1971 TOTAL 97,191.7 MEAN 266 MAX 5,310 MIN 1.9 CFSM 1.02 IN 13.80

PEAK DISCHARGE (BASE, 1,700 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-18	2230	13.07	1,770	5-31	2100	18.64	5,760

02035000 JAMES RIVER AT CARTERSVILLE, VA.
(International Hydrological Decade River Station)

LOCATION.--Lat 37°40'15", long 78°05'10", Goochland County, on left bank 200 ft downstream from bridge on State Highway 45 between Pemberton and Cartersville, 1.8 miles downstream from Willis River, and at mile 152.4.

DRAINAGE AREA.--6,257 sq mi.

PERIOD OF RECORD.--October 1898 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Datum of gage is 161.57 ft above mean sea level (levels by Corps of Engineers). Prior to June 4, 1927, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--73 years, 6,882 cfs (14.94 inches per year).

EXTREMES.--Current year: Maximum discharge, 79,400 cfs June 1 (gage height, 21.51 ft, from floodmarks); minimum daily, 640 cfs Oct. 9.

Period of record: Maximum discharge, 250,000 cfs Aug. 21, 1969 (gage height, 33.75 ft, from floodmarks), from rating curve extended above 160,000 cfs on basis of slope-conveyance study; minimum, 316 cfs Sept. 13, 14, 1966 (gage height, 0.02 ft); minimum daily, 330 cfs Sept. 14, 1966.

REMARKS.--Records good. Moderate diurnal fluctuation caused by powerplants above station. Water-quality records for the current year are included in this report.

REVISIONS (WATER YEARS).--WSP 972: 1936(M). WSP 1203: 1901-2(M), 1924-25(M), 1928(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	700	24,200	3,240	4,100	4,400	11,100	6,450	3,920	76,600	3,880	2,560	1,610
2	680	14,900	3,030	3,950	4,200	10,400	6,300	3,800	46,400	3,590	2,840	1,460
3	710	10,000	2,890	4,260	4,300	11,300	5,910	3,600	23,400	3,860	2,380	1,410
4	720	10,400	2,910	3,870	3,900	20,300	5,610	3,640	17,600	3,500	3,080	1,550
5	700	13,100	3,170	6,260	3,600	21,900	5,470	3,580	15,400	3,170	5,780	1,530
6	680	12,700	2,870	15,900	4,000	20,500	5,220	3,360	12,000	3,010	4,860	1,480
7	660	10,100	2,680	17,400	6,130	15,400	14,200	3,370	10,300	3,030	3,710	1,440
8	650	8,790	2,710	16,600	17,800	12,900	23,700	3,760	10,200	3,360	3,720	1,420
9	640	7,420	2,430	11,900	21,800	11,500	15,500	4,410	9,070	2,740	2,820	1,360
10	650	6,260	2,480	9,260	16,900	11,200	17,500	4,600	8,210	2,910	2,700	1,360
11	670	7,540	2,230	7,980	13,200	9,880	17,800	6,210	7,020	4,110	2,380	1,300
12	700	18,000	2,320	7,210	9,980	8,750	15,500	5,620	6,170	4,640	2,230	3,530
13	730	15,600	2,790	6,280	10,600	7,990	12,600	11,800	5,940	4,150	1,930	8,040
14	680	13,500	2,990	6,060	42,200	7,590	10,600	22,000	6,210	3,640	2,080	6,600
15	650	14,100	2,700	7,210	55,200	7,070	9,430	17,100	6,250	3,460	1,880	4,180
16	660	14,400	2,600	10,300	37,900	6,840	8,190	22,400	6,940	3,010	1,610	3,870
17	700	9,920	4,440	9,390	20,100	6,260	7,440	25,600	10,200	2,660	1,470	3,560
18	740	7,730	5,920	7,990	14,700	5,940	6,840	18,700	10,900	2,470	1,700	2,580
19	720	6,420	5,030	6,840	12,000	5,940	6,390	15,900	9,370	2,400	1,750	2,280
20	670	5,220	4,300	6,070	10,800	8,290	5,870	12,400	7,420	2,420	1,890	2,050
21	707	5,290	3,930	5,020	10,900	7,630	5,440	16,200	6,320	2,220	1,620	2,420
22	1,120	5,580	4,730	5,010	14,300	6,510	5,260	12,200	5,900	2,370	1,630	3,730
23	3,450	5,270	6,410	5,080	34,900	6,260	4,900	11,100	5,620	1,890	1,450	6,180
24	1,940	5,050	10,300	4,900	30,400	5,860	4,750	9,640	5,820	1,700	1,600	5,100
25	1,530	4,800	14,700	5,010	26,800	5,430	4,460	7,600	5,410	1,940	1,350	4,000
26	1,420	4,270	10,900	5,010	18,600	5,390	4,300	6,710	5,580	1,730	1,420	3,300
27	1,040	3,910	8,500	4,870	14,600	5,600	4,150	5,850	5,620	1,930	1,650	3,100
28	1,110	3,620	7,010	4,340	12,600	6,190	4,040	5,410	4,980	2,360	3,730	3,000
29	1,050	3,460	5,920	4,400	-------	7,020	4,110	10,400	4,100	1,970	3,120	2,800
30	1,110	3,200	5,100	4,600	-------	7,010	3,960	54,100	3,860	2,390	2,380	2,700
31	10,700	-------	4,800	4,500	-------	6,500	-------	76,000	-------	2,630	1,810	-------
TOTAL	38,887	274,750	146,030	221,570	476,810	290,350	251,890	410,980	358,810	89,140	75,130	88,940
MEAN	1,254	9,158	4,711	7,147	17,030	9,366	8,396	13,260	11,960	2,875	2,424	2,965
MAX	10,700	24,200	14,700	17,400	55,200	21,900	23,700	76,000	76,600	4,640	5,780	8,040
MIN	640	3,200	2,230	3,870	3,600	5,390	3,960	3,360	3,860	1,700	1,350	1,300
CFSM	.20	1.46	.75	1.14	2.72	1.50	1.34	2.12	1.91	.46	.39	.47
IN.	.23	1.63	.87	1.32	2.83	1.73	1.50	2.44	2.13	.53	.45	.53

CAL YR 1970 TOTAL 1,908,516 MEAN 5,229 MAX 60,400 MIN 640 CFSM .84 IN 11.35
WTR YR 1971 TOTAL 2,723,287 MEAN 7,461 MAX 76,600 MIN 640 CFSM 1.19 IN 16.19

PEAK DISCHARGE (BASE, 40,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-15	1930	17.46	56,500	6-1	0200	21.51	79,400

02036500 FINE CREEK AT FINE CREEK MILLS, VA.

LOCATION.--Lat 37°35'52", long 77°49'12", Powhatan County, on right bank 75 ft downstream from bridge on State Highway 711 at Fine Creek Mills, 0.8 mile upstream from mouth, and 6.7 miles northeast of Powhatan.

DRAINAGE AREA.--22.1 sq mi.

PERIOD OF RECORD.--July 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 156.59 ft above mean sea level. Prior to Oct. 28, 1953, nonrecording gage and crest-stage gage at site 75 ft upstream at same datum.

AVERAGE DISCHARGE.--27 years, 18.0 cfs (11.06 inches per year).

EXTREMES.--Current year: Maximum discharge, 955 cfs Aug. 27 (gage height, 4.76 ft); minimum, 0.36 cfs Oct. 1 (gage height, 1.53 ft).

Period of record: Maximum discharge, 3,640 cfs Oct. 21, 1961 (gage height, 8.35 ft); minimum daily, 0.08 cfs Oct. 1, 1968; minimum gage height, 1.53 ft Sept. 30, Oct. 1, 1970.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1203: 1948. WSP 1303: 1945(M). WSP 1383: 1954. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.43	3.7	5.1	5.8	6.2	17	14	9.0	114	9.8	23	12
2	.50	2.9	4.7	7.6	4.3	17	14	9.6	40	12	33	13
3	.46	3.4	4.3	7.1	4.0	42	20	9.6	31	7.9	14	11
4	.60	4.7	4.3	7.6	4.3	65	14	9.0	21	6.0	11	9.2
5	.60	6.7	4.0	67	8.6	36	12	9.0	38	5.6	49	7.9
6	.60	3.4	4.0	75	19	26	47	8.5	21	5.6	19	6.8
7	.43	2.2	3.7	29	39	24	124	13	13	6.0	10	6.4
8	.40	2.0	3.4	14	146	20	98	58	12	5.6	7.3	6.0
9	.40	1.8	3.7	9.9	135	16	44	21	9.8	4.6	6.4	6.0
10	.43	3.0	4.0	8.6	50	15	33	13	8.6	4.6	5.6	5.6
11	.46	20	4.3	8.6	32	15	26	11	7.9	21	5.6	10
12	.46	8.1	6.2	8.1	27	14	22	10	6.8	92	6.4	132
13	.46	9.9	7.6	8.1	52	14	20	34	7.9	14	5.2	161
14	.46	6.7	5.5	9.9	77	13	17	24	7.9	7.9	4.9	54
15	.46	58	4.7	9.9	39	14	15	14	14	6.0	4.6	28
16	.60	17	7.6	8.1	29	21	15	126	45	5.6	4.2	19
17	.55	8.6	39	7.1	24	14	14	99	28	5.2	4.6	16
18	.46	6.7	13	7.1	21	12	17	33	14	4.6	9.8	13
19	.46	5.8	8.1	6.2	18	16	16	21	10	4.2	21	13
20	.46	5.8	7.1	5.5	17	26	12	17	9.8	4.6	36	12
21	1.0	7.1	9.3	5.5	17	15	12	77	8.6	4.2	10	11
22	2.9	5.8	20	8.1	20	13	12	36	9.8	3.9	7.9	11
23	1.3	5.5	11	9.9	36	13	11	22	10	3.6	6.8	11
24	.85	5.1	9.9	8.6	25	11	12	17	9.8	3.6	5.6	10
25	.70	4.7	7.6	8.6	20	10	10	14	7.9	3.9	4.9	9.2
26	.60	4.7	7.1	8.1	17	13	10	12	7.3	4.2	4.9	8.6
27	.55	4.7	6.2	6.7	27	17	9.6	10	6.8	11	330	9.2
28	.60	4.7	5.1	5.5	22	30	10	20	7.9	33	323	9.2
29	.65	4.7	4.7	5.8	------	30	11	98	16	11	90	8.6
30	2.7	5.1	4.3	8.1	------	22	9.6	188	9.8	28	22	8.6
31	7.6	------	5.1	9.9	------	17	------	230	------	28	16	------
TOTAL	29.13	232.5	234.6	395.0	936.4	628	701.2	1,272.7	553.6	367.2	1,061.7	638.3
MEAN	.94	7.75	7.57	12.7	33.4	20.3	23.4	41.1	18.5	11.8	34.2	21.3
MAX	7.6	58	39	75	146	65	124	230	114	92	330	161
MIN	.40	1.8	3.4	5.5	4.0	10	9.6	8.5	6.8	3.6	4.2	5.6
CFSM	.04	.35	.34	.57	1.51	.92	1.06	1.86	.84	.53	1.55	.96
IN.	.05	.39	.39	.66	1.58	1.06	1.18	2.14	.93	.62	1.79	1.07

CAL YR 1970 TOTAL 3,619.95 MEAN 9.92 MAX 75 MIN .40 CFSM .45 IN 6.09
WTR YR 1971 TOTAL 7,050.33 MEAN 19.3 MAX 330 MIN .40 CFSM .87 IN 11.87

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-31	0500	3.15	264	9-13	0030	3.15	264
8-27	2100	4.76	955				

02037000 JAMES RIVER & KANAWHA CANAL NEAR RICHMOND, VA.

LOCATION.--Lat 37°33'52", long 77°34'28", Henrico County, on left bank 75 ft downstream from canal bridge, 400 ft downstream from head gates, 1,200 ft north of north end of Bosher Dam on James River, 1.6 miles upstream from Huguenot Memorial Bridge, and 2.0 miles west of city limits of Richmond.

PERIOD OF RECORD.--September 1936 to current year.

GAGE.--Water-stage recorder. Datum of gage is 106.07 ft above mean sea level. Prior to Oct. 1, 1938, at datum 3.06 ft higher.

AVERAGE DISCHARGE.--35 years, 855 cfs.

EXTREMES.--Current year: Maximum discharge, 1,160 cfs May 30 (gage height, 9.23 ft); slight leakage through gates when closed at times during year.

Period of record: Maximum gage height, 24.7 ft Aug. 21, 1969, from high-water mark in gage house (interchange of flow with James River makes maximum discharge indeterminate); no flow at times when head gates were closed.

REMARKS.--Records good. Canal diverts from James River 1,200 ft above Bosher Dam and discharges into river at several points below gaging station near Richmond. Above 2,540 cfs (gage height, 14.5 ft) there is interchange of flow with James River; discharge above 2,540 cfs included in discharge for James River near Richmond. Figures given show flow in canal only; for record of flow of James River near Richmond, see sta 02037500. Water-quality records for the current year are included in this report.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	703	884	790	868	868	940	920	93	956	852	836	775
2	703	852	775	852	835	940	900	94	936	868	836	775
3	703	868	775	868	835	920	920	91	940	868	836	760
4	689	868	706	868	850	980	920	314	940	852	836	775
5	689	836	352	884	868	1,040	900	852	940	684	868	775
6	689	836	836	940	852	1,020	920	836	940	98	920	775
7	675	868	820	920	880	744	940	836	940	95	868	760
8	649	868	820	900	960	99	960	852	940	94	852	760
9	584	852	820	884	940	90	940	868	940	94	836	760
10	536	852	805	884	900	90	940	868	940	94	820	760
11	572	852	805	884	900	403	940	900	940	95	820	760
12	536	868	805	884	782	940	940	920	940	95	805	820
13	536	852	805	868	334	920	940	920	940	215	805	900
14	597	852	820	884	940	900	940	980	940	868	790	868
15	649	836	820	868	940	920	920	940	940	706	644	852
16	689	852	820	900	1,000	920	920	960	940	96	87	852
17	689	852	852	900	940	900	920	940	960	211	86	852
18	649	852	900	900	920	900	920	940	835	836	86	836
19	675	836	884	884	920	920	920	940	434	820	86	805
20	689	852	868	884	940	920	900	960	940	805	86	805
21	703	852	868	868	940	940	900	940	940	805	85	790
22	703	852	868	868	920	900	920	920	920	805	84	805
23	760	852	900	868	940	900	900	900	920	805	405	852
24	820	836	900	868	940	900	900	900	920	790	649	884
25	775	836	940	884	960	900	900	900	900	790	649	868
26	760	820	900	868	940	900	884	900	900	790	675	852
27	760	820	884	868	920	900	884	900	900	790	703	820
28	745	805	884	868	940	900	884	900	900	805	689	820
29	745	790	884	852	------	920	680	920	868	820	689	805
30	745	790	868	836	------	920	100	946	852	805	717	805
31	760	------	868	868	------	900	------	960	------	820	775	------
TOTAL	21,177	25,341	25,642	27,240	24,904	25,486	26,472	25,190	27,241	18,171	18,923	24,326
MEAN	683	845	827	879	889	822	882	813	908	586	610	811
MAX	820	884	940	940	1,000	1,040	960	980	960	868	920	900
MIN	536	790	352	836	334	90	100	91	434	94	84	760

CAL YR 1970 TOTAL 295,163 MEAN 809 MAX 940 MIN 100
WTR YR 1971 TOTAL 290,113 MEAN 795 MAX 1,040 MIN 84

02037500 JAMES RIVER NEAR RICHMOND, VA.

LOCATION.--Lat 37°33'47", long 77°32'50", Henrico County, on left bank 0.1 mile upstream from Huguenot Memorial Bridge, 0.5 mile west of city limits of Richmond, 1.7 miles downstream from Bosher Dam, 3.3 miles upstream from Powhite Creek, and at mile 111.7.

DRAINAGE AREA.--6,758 sq mi.

PERIOD OF RECORD.--October 1934 to current year. Gage-height records collected in vicinity of Mayo's Bridge, at mile 104.6, 1876-1956, and at mile 103.7 since 1957, are contained in reports of the National Weather Service.

GAGE.--Water-stage recorder. Control is Williams Island Dams which divert flow for City of Richmond water supply. Datum of gage is 98.82 ft above mean sea level.

AVERAGE DISCHARGE.--37 years, 7,108 cfs (14.28 inches per year), includes flow in James River & Kanawha Canal.

EXTREMES.--Current year: Maximum discharge, 88,500 cfs June 1 (gage height, 17.02 ft, from high-water mark in well); minimum, 10 cfs Oct. 7-11.

Period of record: Maximum discharge, 222,000 cfs (includes Canal flow) Aug. 21, 1969 (gage height, 24.95 ft); minimum daily, about 10 cfs Sept. 8-15, 1966, Sept. 30, Oct. 5, 6, 1968, Oct. 8-10, 1970; minimum daily discharge of James River and James River & Kanawha Canal combined, 370 cfs Sept. 13, 1966.

Probable minimum daily discharge, since 1899, of James River and James River & Kanawha Canal combined, about 350 cfs in October 1930.

REMARKS.--Records good. City of Richmond takes from 40 to 90 cfs for water supply from river below gage except during periods of low flow when supply is obtained from James River & Kanawha Canal. Flow regulated by powerplants above station. Above 18.2 ft stage there is interchange of flow with James River & Kanawha Canal. Records of daily discharge include diversion by City of Richmond, but do not include flow in James River & Kanawha Canal which diverts around station. For Canal records, see sta 02037000. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 972: 1936(M). WSP 1433: 1951(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	23,200	2,980	4,320	4,320	11,300	6,160	4,200	86,700	3,320	2,230	1,280
2	32	17,900	2,780	3,820	3,950	10,500	5,850	4,200	74,400	3,450	2,160	1,160
3	32	12,200	2,600	3,820	4,200	10,500	5,850	3,950	31,100	3,450	2,330	930
4	20	9,510	2,550	3,950	3,580	16,600	5,550	3,820	18,900	3,200	2,090	890
5	20	10,900	3,150	4,360	3,820	22,600	5,120	3,320	17,400	3,100	3,320	990
6	20	14,000	2,500	12,700	3,950	22,000	5,260	2,900	13,500	3,320	5,550	930
7	15	11,300	2,400	18,200	5,400	17,900	8,930	2,900	10,900	3,320	3,580	850
8	10	9,130	2,190	18,900	14,300	14,500	25,800	3,320	9,510	3,580	3,320	810
9	10	8,020	2,110	14,300	26,000	12,600	18,600	3,700	9,700	3,450	2,800	750
10	10	6,480	1,920	10,300	21,300	12,200	16,900	3,820	8,380	3,150	2,140	710
11	15	5,850	1,900	8,380	15,400	10,800	18,400	4,860	7,150	3,380	2,090	750
12	20	14,100	1,880	7,490	12,200	8,940	16,900	5,400	6,160	5,700	1,790	2,310
13	25	16,900	2,040	6,320	10,100	8,020	14,000	5,620	5,400	4,450	1,690	6,810
14	41	15,400	2,430	6,160	25,800	7,320	11,300	21,300	5,700	3,700	1,400	8,570
15	77	13,500	2,500	5,850	56,100	7,150	9,700	18,700	6,090	2,950	1,580	4,840
16	77	16,400	2,310	6,980	52,400	6,640	8,570	20,700	5,850	3,320	2,090	3,580
17	50	11,800	2,950	9,140	25,000	6,320	7,490	30,000	8,760	3,050	1,830	3,200
18	50	8,760	5,410	9,700	16,900	5,550	6,640	21,000	10,900	2,070	1,790	2,600
19	113	6,640	5,260	8,200	13,100	5,550	6,160	17,400	10,500	1,880	2,090	2,070
20	113	5,550	4,320	6,980	10,900	6,480	5,700	13,800	8,020	1,760	2,310	1,690
21	194	4,840	3,820	6,160	10,500	8,200	5,120	18,100	6,320	1,790	2,090	1,370
22	208	5,260	4,080	4,980	11,800	6,640	4,840	15,900	5,700	1,580	1,970	1,970
23	1,040	5,120	5,360	4,710	26,200	6,000	4,710	10,900	5,260	1,670	1,530	3,320
24	2,620	4,710	6,380	4,580	35,000	5,700	4,450	10,500	5,550	1,190	1,050	5,120
25	1,260	4,710	14,300	4,710	29,100	5,260	4,320	8,200	5,260	1,010	1,160	4,080
26	970	4,200	12,600	4,710	21,700	5,120	3,820	6,640	4,840	1,210	890	3,320
27	810	3,950	9,510	4,450	15,900	5,260	3,820	5,850	5,260	1,030	2,880	2,520
28	470	3,450	7,490	4,320	13,500	5,550	3,820	5,120	4,840	1,350	6,160	2,400
29	530	3,320	6,320	3,700	------	6,640	3,820	6,450	4,320	1,690	4,200	2,210
30	530	3,080	5,260	4,320	------	7,150	4,320	40,200	3,580	1,460	2,900	1,860
31	810	------	4,580	4,200	------	6,480	------	74,300	------	2,020	1,900	------
TOTAL	10,242	280,180	135,880	220,710	496,420	291,470	251,920	397,070	405,860	81,600	74,910	73,890
MEAN	330	9,339	4,383	7,120	17,730	9,402	8,397	12,810	13,530	2,632	2,416	2,463
MAX	2,620	23,200	14,300	18,900	56,100	22,600	25,800	74,300	86,700	5,700	6,160	8,570
MIN	10	3,080	1,880	3,700	3,580	5,120	3,820	2,900	3,580	1,010	890	710
(*)	683	845	827	879	889	822	882	813	908	586	610	811
MEAN♦	1,013	10,180	5,210	7,999	18,620	10,220	9,279	13,620	14,440	3,218	3,026	3,274
CFSM♦	.15	1.51	.77	1.18	2.76	1.51	1.37	2.02	2.14	.48	.45	.48
IN.♦	.17	1.68	.89	1.36	2.87	1.74	1.53	2.33	2.39	.55	.52	.54

CAL YR 1970 TOTAL 1,826,263 MEAN 5,003 MAX 62,700 MIN 10 MEAN♦ 5,812 CFSM♦ .86 IN.♦ 11.66
WTR YR 1971 TOTAL 2,720,152 MEAN 7,452 MAX 86,700 MIN 10 MEAN♦ 8,247 CFSM♦ 1.22 IN.♦ 16.57

PEAK DISCHARGE (BASE, 50,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-16	0400	14.24	58,800	6- 1	2300	17.02	88,500

* DIVERSION, IN CUBIC FEET PER SECOND, BY JAMES RIVER & KANAWHA CANAL.
♦ ADJUSTED FOR DIVERSION.

02038000 FALLING CREEK NEAR CHESTERFIELD, VA.

LOCATION.--Lat 37°26'37", long 77°31'21", Chesterfield County, on left bank at upstream side of bridge on State Highway 651, 0.8 mile downstream from Licking Creek, 2.8 miles upstream from Pocoshock Creek, and 4.7 miles northwest of Chesterfield.

DRAINAGE AREA.--32.8 sq mi.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 126.39 ft above mean sea level.

AVERAGE DISCHARGE.--16 years, 28.9 cfs (11.97 inches per year).

EXTREMES.--Current year: Maximum discharge, 339 cfs May 31 (gage height, 6.48 ft); minimum, 0.30 cfs Oct. 4, 5 (gage height, 1.75 ft).

Period of record: Maximum discharge, 2,510 cfs Sept. 12, 1960 (gage height, 12.67 ft); minimum, 0.01 cfs Sept. 20, Oct. 3, 1968.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1904: 1957(M), 1958-60.

DISCHARGF, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.61	6.6	5.4	15	13	36	37	15	188	6.4	12	8.8
2	.60	4.7	5.0	13	9.5	32	33	15	73	6.0	8.0	7.0
3	.57	3.4	4.7	11	7.8	73	35	15	46	15	5.4	5.0
4	.37	3.1	6.2	12	10	124	32	14	33	8.4	4.7	4.6
5	.39	6.5	3.6	77	19	79	28	13	27	5.6	25	4.4
6	.45	3.9	4.4	74	38	56	81	13	22	4.6	21	3.8
7	.47	3.3	3.8	39	79	49	231	13	20	4.6	11	4.3
8	.47	2.8	3.8	27	261	40	198	27	35	4.3	6.0	3.6
9	.48	2.6	4.0	24	211	34	97	26	18	4.1	4.4	3.2
10	.61	4.1	4.2	22	96	31	67	19	15	3.8	3.6	2.6
11	.74	20	4.3	22	58	29	51	15	13	5.3	3.3	2.4
12	.52	17	5.4	22	47	27	43	13	12	29	3.4	9.7
13	.52	16	7.1	19	97	26	39	33	12	24	3.4	53
14	.69	11	6.6	21	158	24	36	37	11	11	3.0	24
15	.80	40	5.4	23	89	25	31	21	14	6.3	2.7	15
16	1.1	36	13	24	59	31	29	208	29	5.1	2.4	8.6
17	1.2	18	50	20	45	29	28	190	29	4.8	2.4	5.8
18	1.1	11	29	18	39	24	27	76	18	4.2	4.8	4.3
19	1.1	8.6	18	15	34	26	25	44	14	3.7	7.7	3.6
20	1.2	8.3	14	12	33	33	23	31	11	3.3	11	3.3
21	1.7	7.9	15	11	31	28	23	28	9.2	3.0	11	4.8
22	2.2	6.6	28	14	40	24	22	24	10	2.8	6.1	5.4
23	1.3	6.1	22	16	87	27	20	20	14	2.6	4.3	4.7
24	1.1	5.0	18	15	56	25	21	17	13	2.7	3.5	4.2
25	.99	4.2	15	15	40	21	19	16	9.7	2.6	2.8	3.5
26	1.1	4.1	13	18	34	26	18	15	7.6	2.7	2.5	3.1
27	1.3	4.3	11	12	54	33	17	13	6.7	5.6	28	2.9
28	1.4	4.4	8.9	9.7	48	59	17	15	7.6	9.0	98	2.8
29	1.5	4.4	7.9	10	------	91	18	81	10	5.0	35	2.7
30	1.9	5.3	8.0	13	------	67	16	155	8.0	17	18	2.8
31	6.2	------	7.3	16	------	47	------	297	------	19	12	------
TOTAL	34.68	278.7	351.9	659.7	1,793.3	1,276	1,362	1,519	735.8	231.5	366.4	213.9
MEAN	1.12	9.29	11.4	21.3	64.0	41.2	45.4	49.0	24.5	7.47	11.8	7.13
MAX	6.2	40	50	77	261	124	231	297	188	29	98	53
MIN	.37	2.6	3.6	9.7	7.8	21	16	13	6.7	2.6	2.4	2.4
CFSM	.03	.28	.35	.65	1.95	1.26	1.38	1.49	.75	.23	.36	.22
IN.	.04	.32	.40	.75	2.03	1.45	1.54	1.72	.83	.26	.42	.24

CAL YR 1970 TOTAL 6,500.04 MEAN 17.8 MAX 149 MIN .37 CFSM .54 IN 7.37
WTR YR 1971 TOTAL 8,822.88 MEAN 24.2 MAX 297 MIN .37 CFSM .74 IN 10.01

PEAK DISCHARGE (BASE, 220 CFS, REVISED)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 8	0345	6.36	317	5-16	1245	6.21	306
4- 7	1945	5.80	259	5-31	1000	6.48	339

02038850 HOLIDAY CREEK NEAR ANDERSONVILLE, VA.
(Hydrologic bench-mark station)

LOCATION.--Lat 37°24'55", long 78°38'10", Appomattox County, on right bank 350 ft downstream from bridge on State Highway 614, 1.0 mile upstream from Holiday Lake, and 5.2 miles southwest of Andersonville.

DRAINAGE AREA.--8.53 sq mi.

PERIOD OF RECORD.--April 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 475 ft (from topographic map).

AVERAGE DISCHARGE.--5 years, 5.99 cfs (9.54 inches per year).

EXTREMES.--Current year: Maximum discharge, 871 cfs May 13 (gage height, 5.16 ft), from rating curve extended as explained below; minimum, 0.46 cfs Oct. 4-8 (gage height, 0.85 ft).

Period of record: Maximum discharge, 871 cfs May 13, 1971 (gage height, 5.16 ft), from rating curve extended above 240 cfs; minimum, 0.10 cfs Sept. 11, 12, 1966; minimum gage height, 0.75 ft July 28, 1966.

REMARKS.--Records good except those for period of no gage-height record, which are fair. Recording rain gage located at station. Water-quality records for the current year are included in this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	3.7	2.6	4.2	3.5	5.4	6.4	4.9	15	4.6	3.2	2.8
2	.55	2.4	2.6	4.0	3.0	6.3	6.6	4.9	11	4.6	4.3	2.8
3	.60	2.3	2.6	4.0	2.7	20	7.1	5.7	11	4.0	3.0	2.6
4	.55	2.9	2.6	15	3.2	35	6.1	5.2	9.7	3.7	5.8	2.5
5	.50	4.4	2.4	35	4.2	12	5.8	4.8	8.6	3.4	6.6	2.5
6	.55	2.9	2.4	16	7.0	8.9	26	4.8	7.7	3.7	3.7	2.3
7	.55	2.3	2.4	9.7	32	7.7	66	6.6	7.3	4.3	3.0	2.3
8	.55	2.0	2.4	7.9	51	6.6	21	13	6.8	3.7	2.6	2.2
9	.60	1.8	2.6	6.9	24	6.0	12	6.8	7.3	3.2	2.5	2.2
10	.66	3.5	2.6	6.1	14	5.8	9.0	5.6	6.6	3.7	2.3	2.2
11	.86	15	2.6	5.6	11	5.9	7.8	5.1	6.2	3.2	3.0	19
12	1.2	9.0	3.7	5.1	6.8	5.6	7.2	5.0	6.5	3.2	3.4	64
13	1.0	6.3	3.5	5.0	40	5.3	6.9	285	6.8	3.0	2.5	12
14	1.0	5.0	2.9	5.2	19	5.4	6.4	48	6.2	3.0	2.3	5.8
15	1.3	12	2.7	5.0	9.4	6.1	6.2	19	5.8	2.8	2.2	4.0
16	1.3	8.5	8.2	4.7	7.3	6.2	6.2	169	9.5	3.2	2.2	3.2
17	1.2	5.7	7.0	4.3	6.0	5.3	6.0	26	12	2.8	2.2	3.0
18	1.1	4.5	4.2	4.0	5.5	5.0	6.0	14	8.0	2.5	7.0	2.8
19	1.1	4.0	3.7	3.1	5.3	11	5.7	9.7	7.2	2.6	4.0	2.8
20	1.1	4.2	3.4	3.5	5.8	10	5.7	7.9	6.6	2.8	2.8	2.8
21	6.8	3.8	6.8	3.8	5.1	7.2	5.7	7.4	6.2	2.5	2.5	2.8
22	3.0	3.5	6.5	4.1	24	6.4	5.6	6.6	5.9	2.3	2.5	3.0
23	1.5	3.1	5.1	4.2	40	6.0	5.5	5.8	5.7	2.3	2.5	3.0
24	1.3	2.8	4.2	4.4	11	5.6	5.6	5.8	8.5	2.3	2.2	2.8
25	1.2	2.8	3.7	4.4	8.2	5.5	5.3	5.8	5.6	2.3	2.0	2.5
26	1.2	2.7	3.5	3.6	6.8	6.7	5.2	5.4	4.9	2.5	2.0	2.5
27	1.2	2.7	3.4	3.3	7.4	7.7	5.1	4.6	4.5	2.3	25	2.6
28	1.2	2.7	3.2	4.2	6.0	12	6.3	9.2	4.3	2.3	9.2	2.5
29	1.3	2.7	3.0	4.5	------	11	5.5	121	5.2	4.3	3.7	2.5
30	15	2.6	2.9	4.2	------	8.0	5.0	261	6.2	6.6	3.0	2.5
31	14	------	2.8	4.0	------	6.8	------	32	------	3.7	2.8	------
TOTAL	64.52	131.8	112.2	199.0	369.2	262.4	284.9	1,115.6	222.8	101.4	126.0	170.5
MEAN	2.08	4.39	3.62	6.42	13.2	8.46	9.50	36.0	7.43	3.27	4.06	5.68
MAX	15	15	8.2	35	51	35	66	285	15	6.6	25	64
MIN	.50	1.8	2.4	3.1	2.7	5.0	5.0	4.6	4.3	2.3	2.0	2.2
CFSM	.24	.51	.42	.75	1.55	.99	1.11	4.22	.87	.38	.48	.67
IN.	.28	.57	.49	.87	1.61	1.14	1.24	4.87	.97	.44	.55	.74

CAL YR 1970 TOTAL 1,565.95 MEAN 4.29 MAX 32 MIN .50 CFSM .50 IN 6.83
WTR YR 1971 TOTAL 3,160.32 MEAN 8.66 MAX 285 MIN .50 CFSM 1.02 IN 13.78

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-13	0815	5.16	871	5-30	0115	4.84	759
5-16	0530	4.12	507				

NOTE.--NO GAGE-HEIGHT RECORD NOV. 7-30, DEC. 30 TO JAN. 28, JUNE 3-29.

02039000 BUFFALO CREEK NEAR HAMPDEN SYDNEY, VA.

LOCATION (revised).--Lat 37°15'25", long 78°29'12", Prince Edward County, on left bank 100 ft upstream from bridge on State Highway 658, 0.8 mile upstream from Locket Creek, 2.0 miles northwest of Hampden Sydney, and 6.0 miles southwest of Farmville.

DRAINAGE AREA.--69.7 sq mi.

PERIOD OF RECORD.--August 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 339.19 ft above mean sea level (levels by Virginia Department of Highways). Prior to Aug. 19, 1953, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--25 years, 58.1 cfs (11.32 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,050 cfs Sept. 12 (gage height, 7.81 ft), from rating curve extended above 1,600 cfs; minimum daily, 2.7 cfs Oct. 7, 8.

Period of record: Maximum discharge, 6,440 cfs Aug. 18, 1955 (gage height, 9.00 ft), from rating curve extended above 1,600 cfs; minimum daily, 2.7 cfs Oct. 7, 8, 1970.

Flood in August 1940 reached a stage of about 15 ft, from information by local resident.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1303: 1948-50(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	42	20	19	24	43	47	26	211	38	44	51
2	4.0	31	19	24	22	44	44	26	122	34	38	42
3	3.6	26	18	30	22	108	52	30	89	30	45	36
4	3.2	26	18	40	22	203	44	28	61	27	53	33
5	3.0	30	17	150	22	115	40	26	51	26	79	31
6	2.8	24	17	250	40	85	91	26	42	26	44	30
7	2.7	21	16	130	148	68	222	31	34	27	35	30
8	2.7	20	17	72	462	56	156	50	30	25	29	28
9	2.8	19	17	57	485	48	104	48	28	25	27	27
10	2.9	24	17	49	154	43	77	39	25	24	25	26
11	3.4	102	17	43	115	43	62	32	24	24	25	28
12	3.8	60	19	39	85	40	55	30	25	24	24	1,010
13	4.4	43	19	36	157	37	49	144	29	23	23	470
14	3.6	35	18	41	240	36	44	115	26	22	21	265
15	6.2	382	18	37	118	40	39	77	25	21	21	163
16	6.5	87	24	34	84	47	37	611	62	21	20	102
17	6.2	55	46	32	65	40	36	328	54	21	21	73
18	5.9	42	34	32	56	36	34	160	39	20	34	56
19	6.2	34	30	28	50	49	32	94	32	20	47	49
20	6.5	32	26	25	47	81	32	64	28	20	38	45
21	15	31	34	32	46	62	31	52	25	19	31	44
22	20	28	56	25	48	53	30	43	23	19	27	51
23	16	25	46	29	54	49	29	36	78	18	25	49
24	14	24	39	28	71	43	29	32	127	18	23	45
25	13	22	36	30	58	40	28	31	72	18	21	42
26	12	21	30	32	50	47	26	29	50	19	20	40
27	12	20	26	27	55	55	25	26	40	18	365	39
28	11	20	23	27	48	74	30	35	35	19	581	38
29	11	20	22	32	------	90	28	209	38	52	228	38
30	34	20	20	35	------	62	27	796	49	104	127	39
31	65	------	19	27	------	52	------	426	------	56	74	------
TOTAL	308.0	1,366	778	1,492	2,568	1,889	1,580	3,700	1,574	858	2,215	3,020
MEAN	9.94	45.5	25.1	48.1	107	60.9	52.7	119	52.5	27.7	71.5	101
MAX	65	382	56	250	485	203	222	796	211	104	581	1,010
MIN	2.7	19	16	19	22	36	25	26	23	18	20	26
CFSM	.14	.65	.36	.69	1.54	.87	.76	1.71	.75	.40	1.03	1.45
IN.	.16	.73	.42	.80	1.59	1.01	.84	1.97	.84	.46	1.18	1.61

CAL YR 1970 TOTAL 11,085.6 MEAN 30.4 MAX 382 MIN 2.7 CFSM .44 IN 5.92
WTR YR 1971 TOTAL 21,768.0 MEAN 59.6 MAX 1,010 MIN 2.7 CFSM .86 IN 11.62

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 9	0330	6.09	635	8-27	2300	6.97	1,170
5-16	1300	6.65	955	9-12	1300	7.81	2,050
5-30	1100	6.77	1,020				

02039500 APPOMATTOX RIVER AT FARMVILLE, VA.

LOCATION.--Lat 37°18'25", long 78°23'20", Cumberland County, on left bank 4 ft downstream from bridge on State Highway 45 at north town limits of Farmville, and 1.1 miles downstream from Buffalo Creek.

DRAINAGE AREA.--303 sq mi.

PERIOD OF RECORD.--March 1926 to current year.

GAGE.--Water-stage recorder. Datum of gage is 281.93 ft above mean sea level. Prior to Nov. 29, 1928, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--45 years, 263 cfs (11.79 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,720 cfs May 31 (gage height, 17.41 ft); minimum, 13 cfs Oct. 8-11 (gage height, 3.11 ft).

Period of record: Maximum discharge, 21,000 cfs Aug. 15, 1940 (gage height, 23.60 ft), from rating curve extended above 12,000 cfs; minimum, 3.8 cfs Sept. 25, 1941.

REMARKS.--Records good. Diurnal fluctuation at low flow caused by Prince Edward Mill 0.2 mile upstream. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 972: 1927-37, 1938(M). WSP 1303: 1927(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	220	74	76	86	201	199	111	1,580	132	115	140
2	79	120	71	122	60	195	184	109	567	111	93	117
3	77	105	69	114	7C	371	200	113	386	104	100	101
4	74	115	67	114	9C	1,030	183	122	298	93.	108	93.
5	71	120	60	628	122	735	165	111	249	86	217	88
6	41	100	61	1,460	194	369	255	106	219	83	168	89
7	15	80	58	578	378	294	1,080	117	193	87	108	83
8	13	68	56	312	1,69C	242	1,240	237	178	87	87	78
9	13	64	62	233	2,46C	207	518	231	189	79	76	73
1C	13	80	63	197	1,120	194	335	162	180	78	68	69
11	13	388	66	175	44C	191	266	134	158	78	65	80
12	14	390	71	159	317	180	230	123	150	73	100	1,060
13	21	203	81	146	619	168	209	584	166	69	85	2,970
14	19	157	78	146	1,720	161	192	2,710	163	66	61	874
15	18	636	71	151	776	172	174	1,310	148	63	56	398
16	18	518	90	143	370	235	165	1,710	198	62	53	243
17	20	237	219	132	282	190	160	3,340	319	67	52	174
18	22	165	193	126	239	160	157	1,010	226	63	75	140
19	21	133	140	115	212	187	147	420	186	57	153	123
20	20	121	122	87	201	356	140	291	167	59	110	112
21	34	126	141	100	197	275	137	262	158	58	83	107
22	119	116	268	123	20C	215	135	217	149	53	70	111
23	84	103	238	117	735	191	129	175	180	50	72	116
24	52	90	195	122	628	171	129	155	552	50	64	109
25	42	81	170	127	310	157	125	147	256	50	54	103
26	37	82	141	126	249	167	118	142	167	53	51	95
27	33	77	114	102	249	199	115	129	135	53	373	93
28	33	77	93	80	238	272	122	137	120	53	1,940	91
29	34	74	83	100	------	368	130	780	111	66	907	87
30	100	76	76	133	------	296	117	3,900	136	141	338	88
31	200	------	70	128	------	230	------	5,320	------	155	197	------
TCTAL	1,432	4,922	3,361	6,472	14,252	8,379	7,456	24,415	7,884	2,379	6,099	8,105
MEAN	46.2	164	108	209	509	270	249	788	263	76.7	197	270
MAX	200	636	268	1,460	2,460	1,030	1,240	5,320	1,580	155	1,940	2,970
MIN	13	64	56	76	60	157	115	106	111	50	51	69
CFSM	.15	.54	.36	.69	1.68	.89	.82	2.60	.87	.25	.65	.89
IN.	.18	.60	.41	.79	1.75	1.03	.92	3.00	.97	.29	.75	1.00

CAL YR 1970 TOTAL 44,697 MEAN 122 MAX 873 MIN 12 CFSM .40 IN 5.49
WTR YR 1971 TOTAL 95,156 MEAN 261 MAX 5,320 MIN 13 CFSM .86 IN 11.68

PEAK DISCHARGE (BASE, 1,900 CFS, REVISED)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 9	0400	14.37	2,620	5-31	0500	17.41	6,720
5-14	1530	15.90	3,760	8-28	1800	14.07	2,460
5-17	0800	16.17	4,060	9-13	0800	15.76	3,620

02040000 APPOMATTOX RIVER AT MATTOAX, VA.

LOCATION.--Lat 37°25'17", long 77°51'33", Amelia County, on right bank 75 ft upstream from Southern Railway bridge at Mattoax, 0.3 mile upstream from Skinquarter Creek, and 3.7 miles upstream from Flat Creek.

DRAINAGE AREA.--726 sq mi.

PERIOD OF RECORD.--August 1900 to December 1905, March 1926 to current year.

GAGE.--Water-stage recorder. Datum of gage is 174.51 ft above mean sea level. August 1900 to December 1905, nonrecording gage at same site, different datum. March 1926 to October 1936, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--50 years, 672 cfs (12.57 inches per year).

EXTREMES.--Current year: Maximum discharge, 8,970 cfs June 2 (gage height, 24.34 ft); minimum, 22 cfs Oct. 14, 15 (gage height, 4.97 ft).

Period of record: Maximum discharge, 35,000 cfs Aug. 18, 1940 (gage height, 35.3 ft, from floodmark in gage house), from rating curve extended above 20,000 cfs on basis of records for stations at Farmville and near Petersburg; minimum, 11 cfs Oct. 2, 1930 (gage height, 3.52 ft).

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 892: 1938. WSP 972: 1928, 1932, 1934-38. WSP 1303: 1901(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECCND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	391	176	481	293	719	694	302	7,090	320	391	423
2	93	530	176	400	205	616	591	273	8,730	326	348	300
3	91	293	167	330	144	702	565	264	8,310	285	291	225
4	87	243	162	493	223	1,840	575	262	5,260	257	231	190
5	84	273	154	785	281	2,450	545	273	1,330	230	388	170
6	81	285	148	2,290	405	2,410	632	268	783	205	441	160
7	78	266	139	2,620	849	1,180	2,160	258	635	193	424	170
8	64	217	138	2,520	2,740	891	2,970	340	533	196	251	150
9	37	172	137	997	3,320	735	3,020	514	459	220	190	140
1C	27	154	139	707	3,420	623	2,300	604	421	193	155	130
11	24	254	144	597	3,620	570	1,040	425	411	184	133	150
12	23	923	150	525	3,830	542	826	328	356	273	133	1,070
13	23	1,040	163	467	1,840	513	717	389	349	179	138	2,240
14	22	570	173	433	2,320	478	642	1,190	349	157	162	2,450
15	24	761	173	430	2,720	471	573	2,100	412	144	135	2,600
16	37	1,700	174	436	2,80C	574	518	3,080	483	132	104	1,160
17	33	1,380	332	407	1,310	630	478	3,480	651	127	97	632
18	31	648	655	372	893	536	459	3,560	806	125	137	465
19	31	431	575	344	751	469	438	3,620	570	122	195	385
20	35	338	387	300	674	606	415	3,860	433	114	370	344
21	46	296	322	234	625	959	393	2,590	413	105	335	310
22	62	283	423	3C1	610	767	378	1,290	939	103	230	290
23	88	269	753	321	786	607	365	821	638	100	150	280
24	179	242	687	312	1,480	529	355	623	509	98	160	265
25	134	219	528	317	1,380	468	335	525	1,050	97	120	280
26	96	202	434	322	855	445	325	466	673	96	100	265
27	78	194	359	315	763	481	305	418	459	100	1,300	250
28	69	193	288	265	779	643	295	394	371	135	1,370	245
29	65	185	241	153	------	986	302	1,060	354	112	1,940	240
30	71	180	178	273	------	1,220	314	3,410	302	223	1,730	240
31	106	------	215	332	------	912	------	4,750	------	410	699	------
TOTAL	2,002	13,132	8,890	19,079	39,916	25,572	23,525	41,737	44,079	5,561	12,848	16,219
MEAN	64.6	438	287	615	1,426	825	784	1,346	1,469	179	414	541
MAX	179	1,700	753	2,620	3,830	2,450	3,020	4,750	8,730	410	1,940	2,600
MIN	22	154	137	153	144	445	295	258	302	96	97	130
CFSM	.09	.60	.40	.85	1.96	1.14	1.08	1.85	2.02	.25	.57	.75
IN.	.10	.67	.46	.98	2.05	1.31	1.21	2.14	2.26	.28	.66	.83

CAL YR 1970 TOTAL 151,645 MEAN 415 MAX 2,630 MIN 22 CFSM .57 IN 7.77
WTR YR 1971 TOTAL 252,560 MEAN 692 MAX 8,730 MIN 22 CFSM .95 IN 12.94

PEAK DISCHARGE (BASE, 4,000 CFS).--JUNE 2 (2000) 8,970 CFS (24.34 FT).

02041000 DEEP CREEK NEAR MANNBORO, VA.

LOCATION.--Lat 37°16'59", long 77°52'22", Amelia County, on left bank 300 ft upstream from bridge on State Highway 153, 0.9 mile upstream from Sweathouse Creek, 3.4 miles northwest of Mannboro, and 7.5 miles southeast of Amelia.

DRAINAGE AREA.--158 sq mi.

PERIOD OF RECORD.--September 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 177.20 ft above mean sea level. Prior to Sept. 2, 1949, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--25 years, 125 cfs (10.74 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,290 cfs May 30 (gage height, 11.16 ft, from high-water mark in well), from rating curve extended above 3,800 cfs; minimum daily, 0.11 cfs Oct. 18.

Period of record: Maximum discharge, 7,140 cfs Sept. 25, 1947 (gage height, 13.1 ft, from floodmarks), from rating curve extended above 3,800 cfs; minimum, 0.03 cfs Oct. 4, 5, 1968; minimum gage height, 0.29 ft Aug. 9-12, 1957.

Flood in August 1940 reached a stage of 14.8 ft (discharge, 10,000 cfs, from rating curve extended above 3,800 cfs), from information by local resident.

REMARKS.--Records good except those for periods of no gage-height record, which are fair.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1203: 1948 (calendar year figures only). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TC SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	42	36	35	42	150	105	60	1,450	132	85	30
2	.55	54	32	45	47	118	85	57	753	94	72	27
3	.45	39	31	50	37	155	120	53	228	70	55	24
4	.45	28	29	53	31	443	100	52	142	60	49	24
5	.45	30	27	151	44	668	115	51	120	53	67	23
6	.35	28	29	430	87	446	300	49	98	47	108	22
7	.30	27	26	474	173	214	800	51	85	56	82	22
8	.28	25	23	178	634	162	500	73	85	58	52	20
9	.26	22	23	114	1,570	133	300	91	77	51	39	19
10	.24	21	23	97	974	112	220	74	70	50	34	19
11	.18	74	25	93	428	104	170	60	62	47	32	66
12	.24	155	27	90	226	98	135	51	57	41	40	221
13	.24	128	31	82	190	94	120	62	58	37	39	1,080
14	.17	85	32	79	369	91	105	101	58	35	33	781
15	.12	115	30	79	615	88	95	101	64	31	30	131
16	.15	259	30	76	296	88	88	468	102	30	27	72
17	.12	284	92	70	168	85	84	1,330	178	29	25	57
18	.11	109	140	67	132	82	80	892	138	29	27	50
19	.20	71	105	60	114	77	73	202	88	28	31	46
20	.45	56	71	56	101	91	70	116	70	27	32	44
21	1.3	54	59	58	93	98	69	418	62	25	31	42
22	4.4	53	90	51	96	88	68	873	258	24	30	43
23	10	48	127	53	258	82	67	455	146	24	28	48
24	14	44	105	55	509	80	65	128	82	24	26	49
25	11	37	79	59	232	72	64	94	70	25	23	47
26	8.3	33	65	60	145	74	59	82	57	26	21	44
27	7.7	36	53	52	145	104	55	72	49	28	75	43
28	7.5	32	44	40	185	148	70	70	44	31	147	40
29	7.3	31	40	38	------	280	65	382	43	39	154	39
30	7.7	34	36	39	------	200	63	3,030	76	77	61	39
31	25	------	34	46	------	150	------	3,000	------	82	39	------
TOTAL	109.96	2,055	1,594	2,930	7,941	4,875	4,310	12,598	4,870	1,410	1,594	3,212
MEAN	3.55	68.5	51.4	94.5	284	157	144	406	162	45.5	51.4	107
MAX	25	284	140	474	1,570	668	800	3,030	1,450	132	154	1,080
MIN	.11	21	23	35	31	72	55	49	43	24	21	19
CFSM	.02	.43	.33	.60	1.80	.99	.91	2.57	1.03	.29	.33	.68
IN.	.03	.48	.38	.69	1.87	1.15	1.01	2.97	1.15	.33	.38	.76

CAL YR 1970 TOTAL 27,410.46 MEAN 75.1 MAX 500 MIN .11 CFSM .48 IN 6.45
WTR YR 1971 TOTAL 47,498.96 MEAN 130 MAX 3,030 MIN .11 CFSM .82 IN 11.18

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 9	0730	8.47	1,780	5-30	UNKNOWN	11.16	4,290
5-17	1430	7.88	1,630	9-13	1400	7.35	1,360

NOTE.--NO GAGE-HEIGHT RECORD MAR. 29 TO MAY 3, MAY 30, 31.

02041650 APPOMATTOX RIVER AT MATOACA, VA.

LOCATION (revised).--Lat 37°13'28", long 77°28'32", Chesterfield County, on left bank at upstream side of bridge on State Highway 600, 0.2 mile south of Matoaca, 2.0 miles upstream from Rohoic Creek, 2.8 miles downstream from Lake Chesdin, and 3.5 miles west of Petersburg.

DRAINAGE AREA.--1,344 sq mi.

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 85 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 10,500 cfs May 31 (gage height, 10.70 ft), from rating curve extended above 9,500 cfs; minimum, 126 cfs Oct. 6-12 (gage height, 1.82 ft).

Period of record: Maximum discharge, 10,500 cfs May 31, 1971 (gage height, 10.70 ft), from rating curve extended above 9,500 cfs; minimum, 106 cfs June 15, 16, 1970 (gage height, 1.69 ft).

REMARKS.--Records good. Flow regulated by Petersburg Water Authority at Lake Chesdin (capacity, 36,500 acre-ft), 2.8 miles upstream, from which an average of 12.4 cfs is diverted for industrial and municipal use. Records do not include flow of Upper Appomattox Canal of Virginia Electric and Power Co. which diverts around station.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	133	255	544	432	1,320	1,540	450	9,740	486	362	860
2	129	133	265	445	351	1,120	1,200	436	9,380	540	525	535
3	127	135	259	297	255	1,280	1,000	446	8,860	545	505	393
4	127	135	340	297	298	2,560	925	393	8,690	428	565	320
5	127	135	188	420	348	3,640	890	358	8,180	377	704	278
6	126	135	245	1,880	505	3,900	1,180	385	4,380	330	746	254
7	126	135	193	3,410	1,010	3,380	3,130	385	1,450	316	758	230
8	126	135	173	3,790	3,700	1,880	5,190	505	1,120	284	606	218
9	126	135	183	2,990	5,900	1,280	5,450	595	800	264	414	210
10	126	136	191	1,460	6,540	1,000	4,860	710	612	267	309	200
11	126	144	191	1,000	6,060	925	2,970	704	535	270	292	205
12	126	140	210	830	5,300	800	1,630	550	500	270	298	547
13	127	142	229	740	5,000	770	1,240	600	464	267	236	3,000
14	127	140	239	698	4,300	722	1,120	770	436	251	222	4,580
15	129	384	232	692	4,160	686	860	1,660	960	210	215	3,770
16	129	1,190	265	668	4,300	740	800	4,120	1,320	202	200	2,840
17	129	2,100	485	622	3,540	800	722	5,750	1,780	210	192	1,320
18	129	1,740	658	612	1,900	740	710	5,900	1,450	198	198	734
19	129	978	978	575	1,280	734	650	5,300	1,160	185	205	495
20	129	652	835	486	1,080	800	606	4,580	830	190	200	405
21	133	572	683	405	925	860	600	4,860	699	185	212	362
22	133	435	670	358	925	1,080	590	4,350	1,590	185	222	337
23	131	465	800	428	1,560	1,000	482	2,670	2,510	185	233	323
24	131	355	1,130	459	1,930	830	535	1,450	1,740	185	292	340
25	131	301	978	482	2,450	668	482	960	1,160	185	229	330
26	131	290	835	622	1,840	746	477	770	1,240	185	198	309
27	131	272	640	500	1,580	770	428	639	860	190	436	295
28	131	269	528	323	1,450	890	432	600	644	188	2,410	270
29	131	259	559	292	------	1,680	468	1,260	530	188	2,450	260
30	136	265	560	309	------	2,400	450	4,520	495	185	2,510	295
31	136	------	528	377	------	2,260	------	8,830	------	202	1,680	------
TOTAL	4,004	12,440	14,525	27,011	68,959	42,261	41,617	65,506	74,115	8,153	18,615	24,515
MEAN	129	415	469	871	2,463	1,363	1,387	2,113	2,471	263	600	817
MAX	136	2,100	1,130	3,790	6,540	3,900	5,450	8,830	9,740	545	2,510	4,580
MIN	126	133	173	292	255	668	428	358	436	185	192	200

CAL YR 1970 TOTAL 244,290 MEAN 669 MAX 4,710 MIN 106
WTR YR 1971 TOTAL 401,721 MEAN 1,101 MAX 9,740 MIN 126

02042500 CHICKAHOMINY RIVER NEAR PROVIDENCE FORGE, VA.

LOCATION.--Lat 37°26'10", long 77°03'40", New Kent County, on left bank 100 ft downstream from bridge on State Highway 618, 1.1 miles southwest of Providence Forge, and 1.7 miles downstream from Schiminoe Creek.

DRAINAGE AREA.--248 sq mi.

PERIOD OF RECORD.--January 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6.07 ft above mean sea level.

AVERAGE DISCHARGE.--29 years, 248 cfs (13.58 inches per year).

EXTREMES.--Current year: Maximum discharge, 962 cfs Feb. 14 (gage height, 8.27 ft); minimum, 1.1 cfs Oct. 15; minimum gage height, 1.78 ft Oct. 14, 15.
Period of record: Maximum discharge, 7,710 cfs Aug. 15, 1955 (gage height, 11.67 ft); minimum, 1.1 cfs Oct. 15, 1970; minimum gage height, 1.53 ft Sept. 13, 1965.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1553: 1956. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	15	52	118	60	391	311	78	454	156	31	93
2	3.2	16	51	123	50	377	308	74	505	110	48	132
3	2.9	18	49	146	58	352	316	72	575	94	61	178
4	2.6	19	46	159	68	384	314	71	730	91	75	176
5	2.3	22	42	167	77	409	296	68	870	82	103	76
6	2.2	27	39	176	123	425	294	64	774	66	186	38
7	2.0	26	37	188	148	418	371	61	607	63	145	31
8	1.9	24	33	212	253	417	425	81	474	66	100	26
9	1.7	23	33	231	321	444	462	93	339	65	82	26
10	1.6	26	33	285	363	439	478	97	229	63	81	27
11	1.5	45	34	344	416	400	503	105	165	55	68	27
12	1.5	74	36	352	536	325	576	110	122	67	81	32
13	1.4	94	41	327	827	272	600	131	112	79	61	50
14	1.3	126	46	283	944	228	544	176	111	86	50	58
15	1.2	160	52	248	783	204	440	173	109	71	37	68
16	1.7	189	58	226	661	193	343	266	133	65	30	81
17	3.0	214	112	206	538	176	266	412	191	65	26	107
18	3.6	217	146	190	491	166	218	477	272	53	25	146
19	3.6	183	181	170	532	168	188	520	347	49	29	177
20	3.5	178	200	150	534	196	167	477	417	41	37	154
21	4.0	207	217	140	486	225	149	491	516	33	41	72
22	8.0	202	268	145	410	228	135	522	723	29	35	58
23	9.0	153	288	153	386	211	123	494	828	26	31	53
24	12	104	260	159	352	202	115	419	758	23	28	45
25	12	78	218	171	320	210	106	306	524	22	25	38
26	11	64	195	181	302	221	97	192	361	23	23	35
27	10	57	191	177	320	233	90	125	253	24	25	32
28	9.6	52	177	140	371	244	84	95	211	24	55	30
29	11	50	150	110	------	265	81	156	206	24	59	29
30	11	49	111	90	------	298	80	249	201	26	65	27
31	15	------	103	80	------	316	------	372	------	23	72	------
TOTAL	158.9	2,712	3,499	5,847	10,730	9,047	8,480	7,027	12,117	1,764	1,895	2,122
MEAN	5.13	90.4	113	189	383	292	283	227	404	56.9	61.1	70.7
MAX	15	217	288	352	944	444	600	522	870	156	186	178
MIN	1.2	15	33	80	50	166	80	61	109	22	23	26
CFSM	.02	.36	.46	.76	1.54	1.18	1.14	..92	1.63	.23	.25	.29
IN.	.02	.41	.52	.88	1.61	1.36	1.27	1.05	1.82	.26	.28	.32

CAL YR 1970 TOTAL 57,549.8 MEAN 158 MAX 774 MIN 1.2 CFSM .64 IN 8.63
WTR YR 1971 TOTAL 65,398.9 MEAN 179 MAX 944 MIN 1.2 CFSM .72 IN 9.81

02043000 LAKE DRUMMOND IN DISMAL SWAMP, VA.

LOCATION.--Lat 36°35'40", long 76°26'20", on left bank in outlet canal, in Chesapeake, 200 ft upstream from dam and gates, 0.5 mile downstream from Lake Drummond, 2.5 miles east of Nansemond County line, 3.1 miles north of North Carolina State line, and 20 miles southwest of Norfolk.

PERIOD OF RECORD.--May 1926 to current year.

GAGE.--Nonrecording gage. Datum of gage is 12.16 ft above mean sea level.

EXTREMES.--Current year: Maximum gage height, 5.25 ft June 6; minimum, 1.50 ft Dec. 13-16.
Period of record: Maximum gage height, 6.68 ft Sept. 17, 1960; minimum, -0.67 ft Nov. 3, 1952.

REVISIONS (WATER YEARS).--WSP 1032: 1934-43.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.87	2.13	1.77	1.98	5.05	5.00	5.01	5.00	5.19	4.79	4.72	4.14
2	2.84	2.19	1.77	2.00	5.08	5.07	5.05	5.10	5.20	4.79	4.70	4.15
3	2.82	2.13	1.76	2.01	5.09	5.03	5.10	5.09	5.20	4.80	4.69	4.10
4	2.80	2.10	1.75	2.08	5.21	4.94	5.09	5.02	5.21	4.77	4.67	4.07
5	2.77	2.16	1.69	2.21	5.08	4.81	4.98	4.99	5.22	4.71	4.64	4.06
6	2.70	2.06	1.77	2.36	5.05	4.80	5.07	5.00	5.25	4.67	4.62	4.01
7	2.67	2.01	1.66	2.52	4.97	5.01	5.04	5.04	5.22	4.69	4.61	3.92
8	2.63	2.00	1.60	2.66	4.79	5.06	5.02	5.10	5.12	4.66	4.57	3.92
9	2.59	1.99	1.59	2.94	4.79	4.97	5.00	4.98	5.07	4.62	4.54	3.93
10	2.58	1.98	1.57	3.15	4.83	4.98	4.92	5.00	5.02	4.62	4.48	3.89
11	2.58	2.10	1.54	3.33	5.02	4.98	4.90	4.98	5.04	4.61	4.45	3.89
12	2.58	2.11	1.52	3.49	5.09	4.94	4.86	4.98	5.04	4.65	4.43	3.89
13	2.51	2.10	1.50	3.68	5.10	4.99	4.95	5.05	5.04	4.63	4.39	4.12
14	2.48	2.08	1.50	3.83	4.93	5.04	5.02	5.05	5.04	4.60	4.34	4.19
15	2.43	2.11	1.50	3.99	4.90	5.05	5.01	5.08	5.00	4.56	4.33	4.20
16	2.50	2.05	1.55	4.12	4.87	5.09	5.00	5.12	4.95	4.58	4.26	4.20
17	2.50	1.98	1.75	4.20	4.81	5.14	4.98	5.20	4.95	4.68	4.25	4.21
18	2.46	1.96	1.69	4.36	4.79	5.08	4.95	5.18	4.90	4.75	4.28	4.21
19	2.40	1.98	1.69	4.47	4.76	5.08	5.05	5.15	4.88	4.78	4.22	4.24
20	2.32	1.98	1.68	4.55	4.88	5.14	5.08	5.11	4.87	4.81	4.20	4.22
21	2.31	1.99	1.74	4.58	4.89	4.92	5.11	5.13	4.88	4.78	4.12	4.23
22	2.30	1.95	1.80	4.69	4.85	4.93	5.12	5.13	4.85	4.75	4.06	4.23
23	2.34	1.93	1.81	4.84	4.93	4.85	5.17	5.08	4.91	4.73	4.01	4.20
24	2.34	1.91	1.88	4.96	4.92	4.90	5.18	5.08	4.90	4.71	4.05	4.18
25	2.33	1.88	1.90	5.05	4.85	4.92	5.11	5.09	4.91	4.69	3.98	4.13
26	2.33	1.82	1.95	5.05	4.80	5.03	5.06	5.07	4.92	4.65	3.93	4.11
27	2.19	1.82	1.90	4.99	4.79	5.04	4.97	5.07	4.96	4.65	4.02	4.11
28	2.18	1.79	1.91	4.81	4.93	5.07	5.00	5.07	4.86	4.70	4.13	4.10
29	2.16	1.76	1.92	4.84	------	5.13	5.06	5.12	4.87	4.69	4.17	4.03
30	2.17	1.76	1.96	4.93	------	5.02	5.02	5.16	4.88	4.72	4.15	4.21
31	2.14	------	1.95	5.00	------	5.03	------	5.14	------	4.75	4.16	------

02043500 CYPRESS SWAMP AT CYPRESS CHAPEL, VA.

LOCATION.--Lat 36°37'30", long 76°36'10", Nansemond County, on right bank 10 ft upstream from bridge on State Highway 32, 0.5 mile downstream from Dragon Swamp, 0.8 mile northwest of Cypress Chapel, and 6.5 miles south of Suffolk.

DRAINAGE AREA.--23 sq mi, approximately.

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 28.65 ft above mean sea level.

AVERAGE DISCHARGE.--18 years, 28.2 cfs (16.65 inches per year).

EXTREMES.--Current year: Maximum discharge, 452 cfs Jan. 6 (gage height, 5.35 ft); no flow at times during year.
Period of record: Maximum discharge, 1,330 cfs Aug. 11, 1967 (gage height, 6.85 ft); no flow at times each year.

REMARKS.--Records fair. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			0	12	60	50	74	1.1	26	0	0	0
2			0	16	56	38	52	.70	14	0	0	0
3			0	15	42	71	68	1.6	7.0	0	0	0
4			0	13	51	193	81	2.3	3.5	0	0	0
5			0	195	82	159	57	1.4	1.2	0	0	0
6			0	354	202	94	92	.80	.12	0	0	0
7			0	144	130	68	185	.36	0	0	0	0
8			0	75	323	53	137	.90	0	0	0	0
9			0	62	279	40	91	9.0	0	0	0	0
10			0	68	157	31	61	10	0	0	0	0
11			0	75	103	26	40	4.9	0	0	0	0
12			0	68	79	23	26	2.1	0	0	0	0
13			0	56	145	20	20	3.0	0	0	0	8.4
14			0	46	298	18	16	18	0	0	0	12
15			0	43	171	20	12	13	0	0	0	2.6
16			0	50	108	45	9.0	35	0	0	0	.40
17			1.6	48	79	44	7.4	66	0	0	0	0
18			.36	40	63	28	5.8	31	0	0	0	0
19			6.2	30	53	20	4.9	11	0	.10	0	0
20			13	26	45	24	3.7	4.5	0	.90	0	2.0
21			13	23	42	21	3.5	2.6	3.2	1.0	0	4.0
22			19	25	41	15	3.0	1.2	1.8	0	0	6.0
23			31	32	118	13	3.0	.60	33	0	0	8.0
24			29	47	120	11	3.5	.12	22	0	0	3.5
25			21	58	75	8.4	3.5	0	2.3	0	0	2.1
26			17	58	54	12	2.8	0	.24	0	0	1.5
27			13	48	58	57	2.1	0	0	0	7.6	1.4
28			9.7	33	64	96	1.6	.21	0	2.6	75	1.3
29			7.0	27	------	106	1.9	12	0	.60	43	1.3
30			5.3	26	------	140	1.4	49	0	0	3.2	3.0
31		------	5.3	40	------	112	------	48	------	0	.28	------
TOTAL	0	0	191.46	1,853	3,198	1,656.4	1,069.1	330.39	114.36	5.20	129.08	57.50
MEAN	0	0	6.18	59.8	114	53.4	35.6	10.7	3.81	.17	4.16	1.92
MAX	0	0	31	354	323	193	185	66	33	2.6	75	12
MIN	0	0	0	12	41	8.4	1.4	0	0	0	0	0
CFSM	0	0	.27	2.60	4.96	2.32	1.55	.47	.17	.007	.18	.08
IN.	0	0	.31	3.00	5.17	2.68	1.73	.53	.18	.008	.21	.09

CAL YR 1970 TOTAL 7,862.10 MEAN 21.5 MAX 506 MIN 0 CFSM .93 IN 12.72
WTR YR 1971 TOTAL 8,604.49 MEAN 23.6 MAX 354 MIN 0 CFSM 1.03 IN 13.92

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
1- 6	0300	5.35	452	2-14	0730	4.70	333
2- 8	0800	5.12	378	3- 4	1800	4.25	219

02044000 NOTTOWAY RIVER NEAR BURKEVILLE, VA.

LOCATION.--Lat 37°04'40", long 78°11'50", Nottoway County, on left bank at downstream side of bridge on State Highway 723, 4.0 miles upstream from Modest Creek, 5.6 miles north of Victoria, and 7.5 miles south of Burkeville.

DRAINAGE AREA.--38.7 sq mi.

PERIOD OF RECORD.--September 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 354.58 ft above mean sea level. Prior to July 4, 1951, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--25 years, 32.4 cfs (11.37 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,640 cfs May 16 (gage height, 13.92 ft); minimum daily, 0.22 cfs Oct. 7-9.

Period of record: Maximum discharge, 3,320 cfs Aug. 18, 1955 (gage height, 19.06 ft); no flow Aug. 29 to Oct. 14, 1954, Sept. 3-5, 12-15, 1963.

Maximum stage since at least 1930, 27.4 ft in August 1940, from Corps of Engineers floodmark.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1383: 1946-47, 1949. WSP 1433: 1948. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	6.5	6.7	13	13	28	27	12	75	11	6.1	2.5
2	.40	4.3	6.3	12	12	25	25	11	37	13	5.9	2.4
3	.37	3.6	6.1	11	11	164	36	12	26	8.6	17	2.3
4	.32	4.0	6.0	16	12	268	27	13	22	6.7	11	1.9
5	.27	8.5	5.6	462	22	78	23	12	19	5.4	11	2.1
6	.24	7.6	5.4	116	99	50	231	11	18	5.3	7.6	2.7
7	.22	4.8	5.4	50	202	41	325	14	17	21	5.4	2.7
8	.22	3.9	5.3	34	752	31	141	35	14	7.4	4.2	2.0
9	.22	3.5	5.4	29	306	26	61	24	13	5.3	3.2	1.7
10	.27	4.5	5.8	25	60	23	44	15	12	4.6	2.9	2.6
11	.37	124	5.8	26	40	23	34	12	11	4.4	34	13
12	.42	32	6.0	28	38	21	29	11	9.7	3.8	25	128
13	.45	15	6.7	24	220	20	27	57	8.8	3.6	6.1	40
14	.52	9.2	6.0	24	159	18	24	69	7.9	3.1	4.0	12
15	.66	420	5.4	25	65	18	21	27	6.8	2.7	3.2	7.2
16	1.0	66	7.7	23	45	25	20	942	19	2.4	2.6	4.9
17	1.0	27	75	19	34	18	19	143	31	2.3	2.6	3.8
18	1.1	18	23	19	29	16	18	58	17	2.1	3.4	3.1
19	1.3	14	15	17	26	18	17	36	11	1.7	5.6	2.7
20	1.1	12	12	14	25	39	16	27	9.2	1.7	4.0	2.6
21	1.6	12	26	14	23	23	16	35	7.4	1.8	3.0	2.4
22	2.4	11	93	15	42	19	15	27	6.0	1.7	2.4	2.5
23	1.8	9.5	34	17	148	18	14	20	174	1.5	2.1	3.1
24	1.3	8.6	24	16	52	16	15	18	140	1.7	1.9	2.9
25	1.1	7.2	17	20	35	14	14	17	27	11	1.8	2.5
26	1.0	7.2	15	19	29	18	13	17	15	4.3	1.6	2.1
27	.96	7.2	11	16	49	22	12	15	11	2.9	41	2.0
28	1.0	7.0	9.7	15	38	84	14	17	9.0	2.3	12	2.0
29	1.1	6.8	9.2	15	------	142	15	383	13	2.3	6.0	1.9
30	2.4	6.7	9.2	16	------	56	12	1,240	12	15	3.6	2.0
31	16	------	9.9	16	------	35	------	250	------	7.4	2.7	------
TOTAL	41.56	871.6	478.6	1,166	2,620	1,397	1,305	3,580	798.8	168.0	242.8	263.6
MEAN	1.34	29.1	15.4	37.6	93.6	45.1	43.5	115	26.6	5.42	7.83	8.79
MAX	16	420	93	462	752	268	325	1,240	174	21	41	128
MIN	.22	3.5	5.3	11	11	14	12	11	6.0	1.5	1.6	1.7
CFSM	.03	.75	.40	.97	2.42	1.17	1.12	2.97	.69	.14	.20	.23
IN.	.04	.84	.46	1.12	2.52	1.34	1.25	3.44	.77	.16	.23	.25

CAL YR 1970 TOTAL 7,721.02 MEAN 21.2 MAX 420 MIN .22 CFSM .55 IN 7.42
WTR YR 1971 TOTAL 12,932.96 MEAN 35.4 MAX 1,240 MIN .22 CFSM .91 IN 12.43

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 8	0630	12.23	1,220	5-30	1430	13.60	1,570
5-16	1430	13.92	1,640				

02044500 NOTTOWAY RIVER NEAR RAWLINGS, VA.

LOCATION.--Lat 36°59'00", long 77°48'00", Brunswick County, on right bank at downstream side of bridge on State Highway 612 at Harpers Bridge, and 2.6 miles northwest of Rawlings.

DRAINAGE AREA.--309 sq mi.

PERIOD OF RECORD.--October 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 184.88 ft above mean sea level.

AVERAGE DISCHARGE.--21 years, 262 cfs (11.51 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,620 cfs May 31 (gage height, 11.65 ft); minimum, 4.0 cfs Oct. 10 (gage height, 2.00 ft).
Period of record: Maximum discharge, 6,580 cfs Oct. 2, 1955 (gage height, 12.82 ft); minimum, 0.40 cfs Oct. 14, 15, 1954; minimum gage height, 1.83 ft Oct. 15, 1954.
Flood in August 1940 reached a stage of 20.8 ft (discharge, about 19,000 cfs), from information by local resident.

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	164	80	134	160	444	355	172	3,530	134	201	82
2	13	123	76	144	130	381	336	166	1,040	131	158	73
3	13	91	76	141	125	467	310	172	481	141	134	70
4	17	73	78	141	140	967	298	166	348	128	260	65
5	9.4	74	74	185	195	1,120	271	160	274	109	519	62
6	5.2	70	73	682	254	595	419	154	223	102	709	59
7	4.9	70	70	675	485	458	1,170	157	194	126	256	57
8	4.6	66	68	339	1,340	390	1,450	198	172	136	164	54
9	4.3	62	71	271	2,560	334	800	294	166	121	126	52
10	4.9	59	73	244	2,550	298	490	271	161	104	102	49
11	5.5	113	73	230	759	282	386	202	150	95	91	80
12	5.5	325	74	226	486	271	330	169	141	97	93	251
13	5.5	325	80	226	504	259	302	202	147	89	164	574
14	5.5	251	78	219	892	241	282	334	152	84	113	380
15	5.8	297	76	216	987	237	248	355	334	74	84	178
16	8.4	763	82	212	552	237	234	857	288	71	73	118
17	19	519	178	202	421	230	226	2,340	334	68	91	93
18	13	231	260	188	368	212	223	2,230	283	63	86	78
19	13	164	194	178	334	205	212	495	204	60	100	71
20	13	136	141	157	310	237	205	320	172	70	91	68
21	22	136	136	140	302	248	198	302	152	60	82	74
22	66	123	274	154	310	223	198	452	227	53	73	89
23	86	113	385	169	568	219	192	288	123	47	65	102
24	71	102	270	172	803	202	195	212	466	46	62	91
25	56	91	191	181	467	188	192	185	539	66	54	78
26	44	86	164	192	372	198	178	178	265	109	50	70
27	36	86	139	178	421	267	169	161	188	102	106	66
28	35	86	121	138	562	310	181	169	161	175	423	68
29	33	84	113	135	------	595	205	662	139	147	274	63
30	39	82	102	151	------	725	188	2,890	131	113	141	71
31	126	------	109	169	------	476	------	5,300	------	136	102	------
TOTAL	802.7	4,965	3,979	6,789	17,427	11,516	10,413	26,213	11,285	3,057	5,047	3,286
MEAN	25.9	166	128	219	622	371	347	652	376	98.6	163	110
MAX	126	763	385	682	2,560	1,120	1,450	5,300	3,530	175	709	574
MIN	4.3	59	68	134	125	188	169	154	131	46	50	49
CFSM	.08	.54	.41	.71	2.01	1.20	1.12	2.11	1.22	.32	.53	.36
IN.	.10	.60	.48	.82	2.10	1.39	1.25	2.43	1.36	.37	.61	.40

CAL YR 1970 TOTAL 60,500.1 MEAN 166 MAX 1,300 MIN 4.3 CFSM .54 IN 7.28
WTR YR 1971 TOTAL 98,779.7 MEAN 271 MAX 5,300 MIN 4.3 CFSM .88 IN 11.89

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 9	2230	8.16	3,080	5-31	1200	11.65	5,620
5-18	0130	8.06	3,010				

02045500 NOTTOWAY RIVER NEAR STONY CREEK, VA.

LOCATION.--Lat 36°54'00", long 77°24'00", Sussex County, on left bank 15 ft downstream from upstream bridge on U.S. Highway 301, 1.8 miles upstream from Island Swamp, 3.3 miles south of town of Stony Creek, and 4.4 miles upstream from Stony Creek.

DRAINAGE AREA.--579 sq mi.

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Datum of gage is 58.42 ft above mean sea level. Prior to Oct. 11, 1934, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--42 years, 517 cfs (12.13 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,100 cfs June 2 (gage height, 16.17 ft); minimum, 20 cfs Oct. 14, 15 (gage height, 1.99 ft).
Period of record: Maximum discharge, 25,200 cfs Aug. 17, 1940 (gage height, 23.66 ft), from rating curve extended above 13,000 cfs; minimum, 5.0 cfs Sept. 2, 5, 1932 (gage height, 0.62 ft).

REMARKS.--Records good. Diurnal fluctuation at low flow caused by Baskerville Mill, 33 miles upstream. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 802: 1935(M). WSP 972: 1931(M), 1932, 1934-35, 1939. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	254	131	269	274	784	825	319	5,800	230	215	136
2	41	295	128	379	232	626	650	295	6,030	210	288	107
3	34	218	126	349	187	784	632	298	3,420	205	228	90
4	33	163	124	311	218	2,210	613	348	983	230	174	82
5	30	133	122	336	434	2,160	542	308	700	200	574	75
6	26	123	118	517	1,030	1,550	900	272	500	180	1,000	76
7	27	119	110	984	1,060	941	2,510	250	400	165	724	111
8	28	109	105	722	2,980	765	2,620	285	320	200	333	76
9	23	106	100	458	3,890	646	2,170	485	320	178	208	66
10	25	101	104	397	3,930	560	1,160	530	330	142	154	62
11	23	115	110	391	3,290	510	813	403	290	137	125	63
12	27	168	114	397	1,160	492	669	295	270	119	117	111
13	24	493	118	368	988	464	592	313	250	113	104	693
14	20	576	124	343	2,200	434	542	586	300	102	156	814
15	23	432	122	334	1,960	411	492	589	610	92	133	492
16	25	575	121	324	1,350	456	449	1,660	799	81	99	265
17	29	959	275	308	854	429	435	2,970	711	75	96	175
18	24	590	464	287	701	374	420	3,010	585	81	113	133
19	29	328	435	271	611	345	405	2,460	459	71	145	109
20	30	245	316	244	571	399	390	806	411	73	134	96
21	33	223	256	217	542	423	370	585	367	71	121	92
22	43	238	510	221	491	393	350	607	377	68	103	100
23	108	209	642	232	655	356	360	658	463	55	90	139
24	217	188	621	280	1,020	341	370	491	760	49	88	168
25	149	167	451	297	913	312	390	378	900	55	87	145
26	106	147	338	315	632	313	330	320	759	71	72	119
27	84	139	286	297	662	412	290	280	420	132	84	101
28	70	137	243	257	827	622	285	291	310	266	255	90
29	64	137	214	184	------	1,300	331	883	270	269	571	87
30	52	135	187	221	------	1,850	344	3,570	250	232	342	98
31	80	------	196	241	------	1,250	------	5,330	------	170	197	------
TOTAL	1,569	7,810	7,311	10,750	33,662	22,912	21,249	29,875	28,364	4,322	7,130	4,971
MEAN	50.6	260	236	347	1,202	739	709	964	945	139	230	166
MAX	217	959	642	984	3,930	2,210	2,620	5,330	6,030	269	1,000	814
MIN	20	101	100	184	187	312	285	250	250	49	72	62
CFSM	.09	.45	.41	.60	2.08	1.28	1.22	1.66	1.63	.24	.40	.29
IN.	.10	.50	.47	.69	2.16	1.47	1.37	1.92	1.82	.28	.46	.32

CAL YR 1970 TOTAL 130,425 MEAN 357 MAX 3,390 MIN 20 CFSM .62 IN 8.38
WTR YR 1971 TOTAL 179,925 MEAN 493 MAX 6,030 MIN 20 CFSM .85 IN 11.56

PEAK DISCHARGE (BASE, 3,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 9	2400	14.01	4,010	6- 2	1030	16.17	6,100

02046000 STONY CREEK NEAR DINWIDDIE, VA.

LOCATION.--Lat 37°04'01" (revised), long 77°36'10", Dinwiddie County, on right bank at upstream side of bridge on U.S. Highway 1, 1.2 miles southwest of Dinwiddie, 1.7 miles downstream from Chamberlains Bed Creek and 5.7 miles downstream from confluence of White Oak and Butterwood Creeks.

DRAINAGE AREA.--112 sq mi.

PERIOD OF RECORD.--September 1946 to current year. Published as "at Dinwiddie" September 1946 to September 1947 and October 1949 to September 1950.

GAGE.--Water-stage recorder. Datum of gage is 129.94 ft above mean sea level. Prior to June 12, 1957, nonrecording gage and crest-stage gage at same site and datum.

AVERAGE DISCHARGE.--25 years, 98.4 cfs (11.91 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,800 cfs May 31 (gage height, 10.30 ft); minimum, 0.37 cfs Oct. 6 (gage height, 0.89 ft).
Period of record: Maximum discharge, 4,530 cfs Sept. 1, 1964 (gage height, 13.24 ft); no flow for part of Oct. 13, 1954.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1303: 1947(M). WSP 1433: 1951(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	8.3	12	27	37	123	139	39	824	22	79	14
2	.49	7.0	12	47	29	98	107	38	385	19	34	11
3	.49	6.3	12	46	25	191	111	35	186	19	27	9.0
4	.58	6.0	11	46	27	452	103	40	113	21	25	7.1
5	.67	7.9	11	65	52	308	87	36	91	18	77	6.0
6	.40	9.9	10	88	160	193	220	31	70	18	138	4.9
7	.40	9.0	9.5	67	198	137	522	32	56	26	100	5.3
8	.40	9.9	9.5	51	636	107	442	50	46	20	40	6.7
9	.58	8.3	9.5	46	672	90	284	74	38	17	22	6.0
10	.85	7.0	9.5	45	433	80	174	61	32	16	16	5.3
11	.94	11	9.9	48	222	75	125	46	28	15	14	9.8
12	.85	13	10	53	150	69	105	36	26	19	28	58
13	.94	38	12	49	210	65	92	61	24	15	24	115
14	1.0	38	13	47	468	62	85	84	24	13	19	79
15	1.0	64	13	49	340	60	72	68	36	11	14	55
16	1.0	88	15	48	193	64	65	445	57	12	11	35
17	1.1	64	80	48	131	58	61	484	79	22	9.8	25
18	1.2	49	68	45	103	49	59	318	65	17	10	20
19	1.2	32	52	41	51	50	54	154	50	13	11	13
20	1.3	25	37	35	63	62	50	90	38	13	10	10
21	1.9	31	32	32	76	60	48	107	29	11	9.4	11
22	3.1	28	97	31	76	56	47	139	30	9.8	9.0	15
23	5.1	23	71	35	167	53	44	129	56	8.6	8.2	21
24	7.9	18	56	39	148	51	46	82	158	7.4	7.8	18
25	4.9	15	39	42	109	46	44	61	87	7.8	6.7	15
26	3.7	14	29	43	91	52	40	52	61	7.8	5.6	12
27	3.5	12	21	39	151	79	37	46	47	8.2	11	10
28	3.1	12	17	30	160	138	39	50	33	9.0	43	9.8
29	2.5	11	14	24	------	366	45	374	25	16	50	9.5
30	3.1	12	11	27	------	336	44	1,140	22	16	24	10
31	7.6	------	12	33	------	219	------	1,670	------	26	18	------
TOTAL	62.37	677.6	814.9	1,366	5,238	3,849	3,391	6,076	2,816	473.6	901.5	626.4
MEAN	2.01	22.6	26.3	44.1	187	124	113	196	93.9	15.3	29.1	20.9
MAX	7.9	88	97	88	672	452	522	1,670	824	26	138	115
MIN	.40	6.0	9.5	24	25	46	37	31	22	7.4	5.6	4.9
CFSM	.02	.20	.23	.39	1.67	1.11	1.01	1.75	.84	.14	.26	.19
IN.	.02	.23	.27	.45	1.74	1.28	1.13	2.02	.94	.16	.30	.21

CAL YR 1970 TOTAL 19,899.40 MEAN 54.5 MAX 468 MIN .31 CFSM .49 IN 6.61
WTR YR 1971 TOTAL 26,292.37 MEAN 72.0 MAX 1,670 MIN .40 CFSM .64 IN 8.73

PEAK DISCHARGE (BASE, 1,200 CFS).--MAY 31 (0700) 1,800 CFS (10.30 FT).

02047000 NOTTOWAY RIVER NEAR SEBRELL, VA.

LOCATION.--Lat 36°46'13", long 77°09'59", Southampton County, on right bank 1,000 ft upstream from bridge on State Highway 653, 1 mile downstream from Three Creek, 2.5 miles southwest of Sebrell, and 5.5 miles upstream from Assamoosick Swamp.

DRAINAGE AREA.--1,421 sq mi.

PERIOD OF RECORD.--September 1941 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5.94 ft above mean sea level. Prior to Aug. 23, 1950, non-recording gage at same site and datum.

AVERAGE DISCHARGE.--30 years, 1,212 cfs (11.58 inches per year).

EXTREMES.--Current year: Maximum discharge, 7,330 cfs June 5 (gage height, 17.34 ft); minimum, 33 cfs Oct. 17, 18 (gage height, 3.03 ft).

Period of record: Maximum discharge, 25,000 cfs July 22, 1945 (gage height, 24.5 ft); minimum observed, 12 cfs Oct. 23, 1941.

Flood in August 1940 reached a stage of 29.7 ft, from floodmarks (discharge, 48,000 cfs, from rating curve extended above 25,000 cfs).

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1333: 1942, 1944, 1948-49. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	90	191	371	528	1,720	3,240	705	3,220	494	319	392
2	66	143	186	465	539	1,760	3,450	663	4,100	418	304	272
3	64	283	185	617	456	1,500	3,240	625	5,590	388	391	211
4	58	270	181	667	473	1,800	2,710	623	6,880	361	383	175
5	53	222	179	666	612	2,300	2,280	669	7,190	345	453	153
6	48	183	172	718	926	3,200	2,030	632	6,250	335	712	139
7	47	159	168	850	1,570	4,100	2,480	570	4,500	317	1,020	126
8	43	154	163	1,140	2,280	4,300	3,150	546	2,490	279	1,030	132
9	41	151	157	1,160	2,890	3,870	3,820	624	1,160	275	694	137
10	42	149	153	909	3,450	3,020	4,490	923	755	301	446	113
11	40	168	150	800	4,110	2,240	5,010	1,010	612	296	312	108
12	38	185	156	790	4,890	1,680	4,880	829	531	447	249	117
13	38	189	162	795	5,620	1,390	3,940	714	506	458	217	142
14	37	356	166	776	5,770	1,240	2,800	854	483	400	187	459
15	39	588	171	754	5,150	1,160	2,010	1,120	497	315	198	802
16	38	554	184	730	4,550	1,200	1,540	1,330	666	248	236	691
17	34	556	239	704	4,270	1,260	1,280	1,920	1,030	212	197	471
18	34	862	319	679	4,100	1,230	1,130	2,590	1,050	188	172	328
19	35	782	631	638	3,550	1,120	1,040	3,020	1,060	180	241	243
20	38	508	664	594	2,720	1,060	983	3,510	1,000	221	296	194
21	39	370	585	530	2,040	1,110	925	4,020	854	260	249	166
22	45	306	554	488	1,620	1,100	874	3,760	707	220	223	161
23	49	299	694	498	1,470	1,020	836	2,480	659	195	197	194
24	53	290	924	526	1,520	955	823	1,480	836	176	175	209
25	150	267	931	593	1,800	901	812	1,030	1,030	165	150	230
26	208	245	791	643	1,940	874	803	805	1,290	151	142	217
27	159	220	639	654	1,660	905	751	674	1,230	148	180	188
28	127	204	536	618	1,570	1,080	701	611	1,020	189	424	164
29	107	195	460	550	------	1,540	683	743	933	323	413	147
30	97	192	398	469	------	2,310	699	1,520	638	353	618	159
31	96	------	344	478	------	2,870	------	2,600	------	356	569	------
TOTAL	2,010	9,140	11,433	20,870	72,114	55,815	63,410	43,200	58,637	9,014	11,397	7,240
MEAN	64.8	305	369	673	2,576	1,800	2,114	1,394	1,955	291	368	241
MAX	208	862	931	1,160	5,770	4,300	5,010	4,020	7,190	494	1,030	802
MIN	34	90	150	371	473	874	683	546	483	148	142	108
CFSM	.05	.21	.26	.47	1.81	1.27	1.49	.98	1.38	.20	.26	.17
IN.	.05	.24	.30	.55	1.89	1.46	1.66	1.13	1.54	.24	.30	.19

CAL YR 1970 TOTAL 349,069 MEAN 956 MAX 5,800 MIN 34 CFSM .67 IN 9.14
WTR YR 1971 TOTAL 364,280 MEAN 998 MAX 7,190 MIN 34 CFSM .70 IN 9.54

02047500 BLACKWATER RIVER NEAR DENDRON, VA.

LOCATION.--Lat 37°01'30", long 76°52'30", Surry County, on left bank 10 ft upstream from Walls Bridge on State Highway 617, 1.2 miles downstream from Cypress Swamp, and 3.5 miles southeast of Dendron.

DRAINAGE AREA.--294 sq mi.

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Datum of gage is 30.99 ft above mean sea level (Corps of Engineers bench mark).

AVERAGE DISCHARGE.--30 years, 288 cfs (13.30 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,460 cfs Apr. 9 (gage height, 5.10 ft); minimum, 0.27 cfs Oct. 16 (gage height, 0.89 ft).

Period of record: Maximum discharge, 5,070 cfs June 5, 1963 (gage height, 9.1 ft, from high-water mark in well); no flow at times.

Flood in August 1940 reached a stage of 13.1 ft, from Corps of Engineers floodmarks (discharge, 10,000 cfs, from rating curve extended above 4,800 cfs).

REMARKS.--Records good except those for period of no gage-height record, which are fair. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	4.5	40	149	160	378	714	110	425	14	81	76
2	12	4.1	38	155	145	396	749	105	450	11	128	48
3	8.8	5.2	37	172	135	475	810	104	475	8.0	117	28
4	6.4	7.9	36	194	135	600	826	102	440	5.0	95	20
5	4.8	8.1	34	223	183	700	810	97	420	3.4	117	16
6	3.6	9.0	33	239	252	760	842	95	390	2.3	128	13
7	2.8	8.8	31	239	258	840	1,000	94	370	2.2	107	9.7
8	1.9	8.6	29	230	466	900	1,240	100	340	2.0	89	7.2
9	1.6	8.3	29	226	665	800	1,460	120	300	7.0	65	5.7
10	1.2	9.2	28	223	834	720	1,200	150	270	30	39	4.4
11	.90	32	28	223	826	660	1,080	170	200	125	33	4.4
12	.65	57	28	223	786	600	1,050	140	140	225	44	12
13	.55	77	29	223	882	550	945	120	110	315	44	29
14	.40	96	29	226	1,020	500	840	150	90	237	39	29
15	.29	116	30	239	1,140	465	693	200	75	164	29	26
16	.35	107	36	234	1,190	440	558	250	72	109	22	22
17	.65	92	83	223	986	400	438	300	70	72	16	18
18	.60	80	107	216	826	380	355	350	60	40	35	13
19	.50	75	155	198	693	340	295	400	50	27	133	10
20	.30	69	183	172	612	320	254	360	42	23	102	7.9
21	.30	66	187	162	564	300	221	330	35	17	90	6.5
22	2.6	62	216	162	532	270	188	300	28	14	73	11
23	3.7	59	219	172	504	250	164	250	27	12	55	22
24	5.9	55	230	180	440	230	156	290	36	10	69	25
25	6.4	52	230	194	352	220	148	280	52	11	79	23
26	6.1	49	216	201	352	210	140	250	65	9.1	40	20
27	5.5	47	194	190	347	240	130	220	46	8.4	53	16
28	4.1	45	165	176	356	300	119	200	30	20	124	13
29	3.1	43	143	149	------	375	117	240	22	20	133	11
30	2.2	41	121	158	------	525	116	290	18	28	124	35
31	3.7	------	119	172	------	618	------	340	------	38	97	------
TOTAL	108.89	1,393.7	3,083	6,143	15,743	14,762	17,658	6,547	5,148	1,609.4	2,400	581.7
MEAN	3.51	46.5	99.5	198	562	476	589	211	172	51.9	77.4	19.4
MAX	17	116	230	239	1,190	900	1,460	400	475	315	133	76
MIN	.29	4.1	28	149	135	210	116	94	18	2.0	16	4.4
CFSM	.01	.16	.34	.67	1.91	1.62	2.00	.72	.59	.18	.26	.07
IN.	.01	.18	.35	.78	1.99	1.87	2.23	.83	.65	.20	.30	.07

CAL YR 1970 TOTAL 101,152.71 MEAN 277 MAX 1,950 MIN .28 CFSM .94 IN 12.80
WTR YR 1971 TOTAL 75,177.69 MEAN 206 MAX 1,460 MIN .29 CFSM .70 IN 9.51

NOTE.--NO GAGE-HEIGHT RECORD MAY 8 TO JUNE 22.

02048000 BLACKWATER RIVER AT ZUNI, VA.

LOCATION.--Lat 36°52'05", long 76°50'07", Isle of Wight County, on left bank at downstream side of bridge on U.S. Highway 460 at Zuni, 1.6 miles downstream from Pope Swamp, and 4.2 miles upstream from Antioch Swamp.

DRAINAGE AREA.--456 sq mi.

PERIOD OF RECORD.--October 1942 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Datum of gage is 8.56 ft above mean sea level. Prior to July 18, 1957, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--29 years, 447 cfs (13.29 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,670 cfs Apr. 10 (gage height, 9.67 ft); minimum, 1.8 cfs Oct. 20, 21 (gage height, 1.16 ft).

Period of record: Maximum discharge, 5,800 cfs June 5, 1963 (gage height, 17.51 ft); no flow Sept. 10-18, 1944, Sept. 28 to Oct. 31, 1954.

Flood in August 1940 reached a stage of 23.2 ft (discharge 16,000 cfs, from rating curve extended above 5,500 cfs).

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	4.8	58	179	225	602	940	202	620	40	142	219
2	14	4.6	56	179	214	602	962	192	680	30	126	184
3	15	4.4	54	179	208	640	985	197	760	23	120	149
4	13	4.4	52	184	202	820	1,030	197	780	19	132	105
5	11	5.5	50	214	238	1,010	1,030	188	700	16	156	67
6	9.3	7.9	47	280	300	1,160	1,100	175	640	13	175	41
7	7.6	10	45	312	365	1,260	1,300	167	602	16	192	28
8	6.2	12	43	312	602	1,300	1,480	167	585	18	184	21
9	5.2	12	41	312	880	1,260	1,570	202	550	13	152	19
10	4.5	13	39	312	1,080	1,120	1,670	252	480	19	120	18
11	3.8	17	37	300	1,160	1,030	1,620	280	395	51	87	15
12	3.5	29	37	300	1,210	962	1,520	260	300	150	58	15
13	3.1	40	37	290	1,260	900	1,390	252	244	184	37	32
14	2.8	48	37	290	1,440	840	1,300	312	188	214	31	70
15	2.6	56	37	290	1,480	780	1,160	380	143	260	31	90
16	2.9	71	39	290	1,570	760	1,080	458	120	280	30	77
17	2.9	90	72	290	1,570	700	940	602	114	238	27	48
18	2.3	111	105	290	1,480	602	840	640	114	188	23	34
19	2.0	127	117	280	1,340	550	720	680	105	142	32	26
20	1.8	131	132	252	1,160	515	602	640	90	102	129	21
21	1.8	114	152	231	1,050	480	515	585	80	62	192	17
22	2.2	111	192	225	940	445	445	532	70	38	192	16
23	2.8	102	225	214	880	410	380	480	72	28	163	19
24	2.6	90	244	219	820	395	350	462	117	21	135	19
25	2.4	82	260	238	780	365	312	462	179	22	138	23
26	2.2	74	252	252	720	365	280	445	163	21	129	25
27	2.2	70	244	252	680	428	252	395	114	20	134	24
28	2.2	66	231	244	640	515	238	350	87	35	219	22
29	3.0	62	219	225	------	620	225	380	72	155	260	20
30	4.0	60	197	219	------	800	214	445	54	202	270	41
31	4.9	------	179	219	------	900	------	532	------	163	260	------
TOTAL	150.3	1,629.6	3,530	7,873	24,454	23,136	26,450	11,551	9,218	2,783	4,076	1,505
MEAN	4.85	54.3	114	254	875	746	882	373	307	89.8	131	50.2
MAX	15	131	260	312	1,570	1,300	1,670	680	780	280	270	219
MIN	1.8	4.4	37	179	202	365	214	167	54	13	23	15
CFSM	.01	.12	.25	.56	1.92	1.64	1.93	.82	.67	.20	.29	.11
IN.	.01	.13	.29	.64	2.00	1.89	2.16	.94	.75	.23	.33	.12

CAL YR 1970 TOTAL 158,836.4 MEAN 435 MAX 2,210 MIN 1.8 CFSM .95 IN 12.96
WTR YR 1971 TOTAL 116,395.9 MEAN 319 MAX 1,670 MIN 1.8 CFSM .70 IN 9.50

02049500 BLACKWATER RIVER NEAR FRANKLIN, VA.

LOCATION.--Lat 36°45'45", long 76°53'55", Southampton County, on right bank 0.4 mile south of Burdette, 0.5 mile upstream from Black Creek, 3.3 miles downstream from Corrowaugh Swamp, and 6 miles north of Franklin.

DRAINAGE AREA.--617 sq mi.

PERIOD OF RECORD.--August 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1.56 ft above mean sea level.

AVERAGE DISCHARGE.--27 years, 598 cfs (13.16 inches per year), adjusted for diversion.

EXTREMES.--Current year: Maximum discharge, 2,130 cfs Apr. 10; maximum gage height, 9.57 ft Feb. 15; minimum daily discharge, 0.40 cfs Oct. 28.

Period of record: Maximum discharge, 9,420 cfs Sept. 14, 1960 (gage height, 17.14 ft, from floodmarks); minimum daily, 0.40 cfs Sept. 10, 1944, Oct. 28, 1970.

Flood of August 1940 reached a stage of about 22 ft (discharge, 21,000 cfs, from rating curve extended above 9,400 cfs).

REMARKS.--Records fair except those below 10 cfs, which are poor. Low-flow occasionally reversed by tide effect. Diversion above station by city of Norfolk for municipal supply most years. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	8.6	48	216	365	775	1,230	283	762	68	345	390
2	8.9	8.1	41	215	343	863	1,230	265	822	61	362	350
3	16	7.6	41	223	330	1,080	1,240	266	863	51	310	271
4	22	7.8	43	217	327	1,340	1,240	276	891	40	245	205
5	18	9.0	41	323	423	1,590	1,220	269	913	31	225	145
6	12	11	40	568	568	1,690	1,270	248	850	28	246	108
7	6.2	14	44	596	662	1,750	1,530	224	745	36	298	81
8	3.4	10	36	521	942	1,700	1,860	209	653	33	356	63
9	3.8	6.7	31	483	1,250	1,650	2,050	245	573	32	335	49
10	5.0	14	25	493	1,440	1,500	2,120	299	510	42	278	39
11	5.0	37	23	507	1,530	1,330	2,090	339	454	60	197	40
12	2.1	47	22	499	1,550	1,210	1,970	364	389	221	132	51
13	2.1	50	24	467	1,620	1,090	1,800	387	352	399	87	83
14	5.7	50	27	448	1,920	988	1,610	447	307	398	51	119
15	7.7	69	21	454	2,090	918	1,430	499	234	370	31	136
16	4.2	81	24	461	2,110	907	1,290	597	168	339	26	138
17	.87	85	59	450	2,070	888	1,160	724	149	316	36	121
18	.52	76	95	450	1,960	830	1,030	780	145	281	42	95
19	.63	78	116	440	1,790	760	907	783	135	239	44	72
20	1.4	90	139	420	1,600	704	792	759	120	213	53	58
21	2.1	109	178	400	1,400	648	696	713	97	191	122	49
22	5.7	100	217	370	1,250	604	614	655	86	144	209	42
23	3.2	95	257	355	1,130	562	546	581	126	103	216	40
24	.99	81	295	350	1,030	514	506	517	145	73	234	45
25	2.3	69	318	380	953	479	475	481	153	67	273	47
26	.63	60	323	413	896	467	439	462	210	72	250	47
27	.42	54	312	416	853	528	391	443	182	70	230	47
28	.40	50	299	393	798	638	339	427	137	62	210	41
29	.50	60	296	359	------	792	315	459	96	78	280	36
30	8.0	63	255	347	------	1,000	300	557	72	187	340	54
31	9.0	------	222	352	------	1,160	------	670	------	293	380	------
TOTAL	167.06	1,500.8	3,912	12,586	33,200	30,955	33,690	14,228	11,339	4,598	6,443	3,062
MEAN	5.39	50.0	126	406	1,186	999	1,123	459	378	148	208	102
MAX	22	109	323	596	2,110	1,750	2,120	783	913	399	380	390
MIN	.40	6.7	21	215	327	467	300	209	72	28	26	36
(*)	6.5	17.5	27.9	10.9	21.0	30.0	3.5	5.1	23.5	.1	5.2	0
MEAN‡	11.9	67.5	154	417	1,207	1,029	1,126	464	402	148	213	102
CFSM‡	.02	.11	.25	.68	1.96	1.67	1.82	.75	.65	.24	.35	.17
IN.‡	.02	.12	.29	.78	2.04	1.92	2.03	.86	.72	.28	.40	.19

CAL YR 1970 TOTAL 172,740.86 MEAN 473 MAX 2,440 MIN .40 MEAN‡ 477 CFSM‡ .77 IN.‡ 10.50
WTR YR 1971 TOTAL 155,680.86 MEAN 427 MAX 2,120 MIN .40 MEAN‡ 439 CFSM‡ .71 IN.‡ 9.65

* DIVERSION, IN CUBIC FEET PER SECOND, BY CITY OF NORFOLK.
‡ ADJUSTED FOR DIVERSION.

02051000 NORTH MEHERRIN RIVER NEAR LUNENBURG, VA.

LOCATION.--Lat 36°59'50", long 78°21'00", Lunenburg County, on right bank at downstream side of bridge on State Highway 40, 0.5 mile downstream from Tusekiah Creek, 4.6 miles upstream from Juniper Creek, and 5.2 miles northwest of Lunenburg.

DRAINAGE AREA.--55.6 sq mi.

PERIOD OF RECORD.--August 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 333.7 ft above mean sea level (levels by Corps of Engineers). Prior to July 5, 1951, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--25 years, 45.5 cfs (11.11 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,800 cfs May 16 (gage height, 15.85 ft), from rating curve extended above 1,700 cfs; minimum, 0.90 cfs Oct. 6 (gage height, 0.80 ft).

Period of record: Maximum discharge, 4,160 cfs Sept. 17, 1957 (gage height, 20.80 ft), from rating curve extended above 1,700 cfs; no flow Sept. 5-21, Oct. 8-14, 1954.

Flood in August 1940 reached a stage of 48 ft, from information by local resident.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1303: 1947(M), 1949(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	13	10	15	18	33	32	16	95	13	11	4.5
2	2.3	8.7	10	17	16	32	30	16	52	17	9.0	4.5
3	1.9	9.6	10	18	15	342	49	19	45	12	10	4.3
4	1.5	12	9.8	32	20	308	35	20	32	9.6	11	3.8
5	1.1	23	8.7	891	45	87	30	17	26	8.5	25	5.1
6	.90	12	9.4	159	156	57	422	16	23	8.7	11	4.1
7	1.1	9.4	9.2	65	533	48	388	20	20	10	9.0	3.8
8	1.2	9.1	8.7	42	793	36	141	88	18	9.0	7.3	3.6
9	1.7	7.5	9.4	37	264	30	74	51	17	7.7	6.7	3.2
10	2.3	15	9.8	32	84	28	52	26	15	8.3	5.9	5.0
11	2.7	439	10	35	54	28	40	21	13	8.1	7.4	71
12	3.2	55	11	37	44	26	35	19	13	7.9	10	410
13	3.0	25	12	31	331	25	32	180	14	7.5	6.3	58
14	3.0	22	10	32	178	23	28	131	13	6.7	5.1	19
15	3.8	1,480	10	32	71	24	25	48	12	6.3	4.7	11
16	5.3	69	18	26	45	30	24	1,270	37	5.7	4.1	9.0
17	4.7	31	121	25	39	23	23	141	28	5.5	3.9	7.9
18	4.1	23	32	24	34	21	22	61	19	4.9	13	7.3
19	4.3	19	23	20	31	31	21	38	16	4.7	9.6	7.1
20	4.7	17	20	17	30	51	20	31	14	4.9	6.9	7.1
21	11	17	95	19	27	29	20	39	12	4.5	5.7	6.9
22	10	15	134	20	112	24	20	30	12	4.3	4.7	6.9
23	5.3	14	51	23	163	23	18	24	84	3.9	4.3	8.1
24	4.1	13	37	23	56	21	20	21	50	4.7	3.8	7.7
25	3.6	12	27	31	40	19	18	21	17	23	3.2	6.7
26	3.2	12	24	26	34	24	17	20	13	8.5	3.0	6.3
27	3.2	12	21	21	67	28	16	17	11	7.1	50	6.1
28	3.2	11	19	17	43	140	21	38	10	6.1	22	6.1
29	3.8	11	17	17	------	118	20	900	20	7.2	8.1	5.9
30	18	11	14	20	------	56	17	1,340	14	25	5.9	6.1
31	60	------	13	21	------	37	------	304	------	10	4.7	------
TOTAL	179.90	2,427.3	814.0	1,825	3,367	1,802	1,710	4,983	765	270.3	292.3	716.1
MEAN	5.80	80.9	26.3	58.9	120	58.1	57.0	161	25.5	8.72	9.43	23.9
MAX	60	1,480	134	891	793	342	422	1,340	95	25	50	410
MIN	.90	7.5	8.7	15	15	19	16	16	10	3.9	3.0	3.2
CFSM	.10	1.46	.47	1.06	2.16	1.05	1.03	2.90	.46	.16	.17	.43
IN.	.12	1.62	.54	1.22	2.25	1.21	1.14	3.33	.51	.18	.20	.48

CAL YR 1970 TOTAL 12,698.20 MEAN 34.8 MAX 1,480 MIN .90 CFSM .63 IN 8.50
WTR YR 1971 TOTAL 19,151.30 MEAN 52.5 MAX 1,480 MIN .90 CFSM .94 IN 12.81

PEAK DISCHARGE (BASE, 2,200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-16	0730	15.85	2,800	5-30	0800	15.60	2,740

02051500 MEHERRIN RIVER NEAR LAWRENCEVILLE, VA.

LOCATION.--Lat 36°43'00", long 77°49'55", Brunswick County, on right bank 50 ft upstream from Gholson Bridge on State Highway 715, 0.6 mile upstream from Allen Creek, and 3 miles southeast of Lawrenceville.

DRAINAGE AREA.--552 sq mi.

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Datum of gage is 136.56 ft above mean sea level. Prior to Nov. 17, 1931, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--43 years, 465 cfs (11.44 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,570 cfs June 1 (gage height, 19.58 ft); minimum, 20 cfs Oct. 13-15 (gage height, 1.30 ft).
Period of record: Maximum discharge, 38,000 cfs Aug. 17, 1940 (gage height, 42.0 ft, from floodmark), from rating curve extended above 13,000 cfs on basis of velocity-area studies and records for Nottoway River near Stony Creek; minimum, 4.2 cfs Oct. 7, 8, 1954; minimum gage height, 0.72 ft Sept. 23, 24, 1932.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 972: 1932(M), 1935. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	203	104	198	158	535	461	225	5,270	178	151	70
2	29	181	101	209	124	429	391	213	951	232	211	61
3	29	117	100	225	165	686	383	232	583	195	122	55
4	27	89	99	219	212	3,180	438	268	475	306	270	50
5	24	77	94	425	359	1,940	392	251	402	168	320	57
6	22	73	90	2,230	1,040	820	734	225	334	133	554	86
7	22	74	89	727	1,690	619	3,620	210	294	126	226	59
8	22	85	87	417	4,560	519	2,240	238	262	136	153	50
9	21	77	87	330	5,960	438	981	384	240	121	112	47
10	21	72	89	304	4,420	383	659	371	224	114	92	44
11	21	102	90	296	890	363	522	267	211	105	81	66
12	21	771	93	308	635	351	449	223	200	99	78	238
13	20	563	98	330	729	335	405	280	226	98	158	1,060
14	20	420	98	296	2,390	320	376	691	229	97	121	502
15	20	546	97	271	1,230	312	342	652	265	87	81	217
16	21	1,950	103	262	669	324	318	2,060	273	79	67	136
17	25	465	223	241	523	303	306	5,000	323	77	63	102
18	30	257	426	222	449	283	297	3,490	293	71	72	85
19	27	190	266	209	404	269	285	680	238	72	88	78
20	25	162	185	180	377	289	270	481	208	86	93	74
21	29	162	172	160	361	338	266	394	194	69	93	74
22	61	149	685	203	354	302	263	362	232	65	73	97
23	87	140	817	209	1,220	270	255	322	221	62	65	142
24	73	127	443	221	1,150	255	271	284	278	59	61	110
25	53	117	340	258	561	239	272	261	357	77	52	89
26	43	111	257	282	433	244	250	252	228	98	47	78
27	37	110	208	264	482	296	231	239	182	132	74	73
28	35	109	180	198	812	378	234	256	162	133	235	69
29	36	108	150	164	------	996	253	940	146	115	257	65
30	46	107	122	238	------	1,110	247	4,330	144	101	139	70
31	167	------	177	215	------	639	------	5,980	------	93	89	------
TOTAL	1,145	7,714	6,170	10,311	32,361	17,764	16,411	30,061	13,645	3,584	4,298	4,004
MEAN	36.9	257	199	333	1,156	573	547	970	455	116	139	133
MAX	167	1,950	817	2,230	5,960	3,180	3,620	5,980	5,270	306	554	1,060
MIN	20	72	87	160	124	239	231	210	144	59	47	44
CFSM	.07	.47	.36	.60	2.09	1.04	.99	1.76	.82	.21	.25	.24
IN.	.08	.52	.42	.69	2.18	1.20	1.11	2.03	.92	.24	.29	.27

CAL YR 1970 TOTAL 97,419 MEAN 267 MAX 2,820 MIN 20 CFSM .48 IN 6.57
WTR YR 1971 TOTAL 147,468 MEAN 404 MAX 5,980 MIN 20 CFSM .73 IN 9.94

PEAK DISCHARGE (BASE, 4,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 9	2330	18.96	6,230	6- 1	0230	19.58	6,570
5-18	0130	17.75	5,620				

02051600 GREAT CREEK NEAR COCHRAN, VA.

LOCATION.--Lat 36°48'46", long 77°55'19", Brunswick County, on left bank at upstream side of bridge on State Highway 618, 1.4 miles southwest of Cochran, and 9.5 miles upstream from Roses Creek.

DRAINAGE AREA.--30.7 sq mi.

PERIOD OF RECORD.--May 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 215.72 ft above mean sea level.

AVERAGE DISCHARGE.--13 years, 24.2 cfs (10.70 inches per year).

EXTREMES.--Current year: Maximum discharge, 551 cfs May 30 (gage height, 7.79 ft); minimum daily, 3.0 cfs Oct. 6-8.

Period of record: Maximum discharge, 4,810 cfs July 10, 1959, June 17, 1966, from rating curve extended above 600 cfs on basis of contracted-opening measurements at gage heights 12.08 and 14.57 ft; maximum gage height, 14.58 ft June 17, 1966; minimum discharge, 0.10 cfs Oct. 11, 12, 1965, Sept. 23, 1968; minimum gage height, 1.50 ft Aug. 19, 1965.

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	23	12	26	20	34	34	18	102	13	11	4.4
2	4.3	14	11	27	16	32	31	17	56	13	9.4	4.2
3	4.1	12	11	24	16	90	37	29	34	13	8.8	4.0
4	3.8	11	11	24	26	154	32	25	26	12	8.4	4.0
5	3.3	13	10	35	70	73	29	20	22	11	9.4	3.9
6	3.0	12	10	30	122	50	112	17	21	11	9.2	3.9
7	3.0	10	10	23	140	42	162	17	19	12	8.8	3.8
8	3.0	9.6	9.9	20	405	37	82	34	17	12	8.2	3.6
9	3.6	9.6	10	23	257	34	56	34	16	10	7.8	3.8
10	3.6	9.6	11	23	105	34	46	26	14	10	7.4	3.8
11	3.6	32	10	25	63	34	41	24	13	10	7.2	4.2
12	3.3	23	11	25	51	33	37	21	13	10	7.2	39
13	3.3	63	12	22	75	29	34	42	17	9.8	7.0	25
14	3.3	28	11	21	125	28	30	41	15	9.4	6.6	9.4
15	3.6	54	10	20	62	28	27	27	17	9.0	6.6	8.2
16	4.9	34	18	19	49	28	25	212	22	8.8	6.4	7.4
17	6.0	21	53	18	42	26	25	158	20	8.8	6.4	7.0
18	5.2	18	26	18	40	22	24	58	15	3.6	7.4	6.8
19	4.6	16	19	17	38	22	23	36	13	8.2	8.0	6.6
20	4.6	17	17	15	36	27	23	28	12	8.2	7.4	6.6
21	8.1	26	29	16	36	24	22	24	14	8.0	6.6	6.8
22	17	18	75	16	36	21	23	23	40	7.8	6.4	15
23	22	16	42	22	44	19	22	21	51	7.8	6.2	11
24	14	14	34	22	42	17	26	19	148	8.0	5.8	8.6
25	11	13	24	26	36	18	23	18	34	10	5.6	7.6
26	9.6	12	22	22	34	21	20	17	23	9.6	5.6	7.2
27	9.0	12	18	20	43	28	19	15	19	11	19	7.0
28	8.1	12	17	17	42	41	21	19	16	22	10	7.0
29	7.8	12	15	17	------	84	23	140	14	10	6.0	7.0
30	14	12	14	21	------	58	19	410	14	9.4	5.1	9.0
31	48	------	15	24	------	39	------	255	------	10	4.7	------
TOTAL	247.6	576.8	597.9	678	2,071	1,227	1,128	1,845	857	321.4	239.6	245.8
MEAN	7.99	19.2	19.3	21.9	74.0	39.6	37.6	59.5	28.6	10.4	7.73	8.19
MAX	48	63	75	35	405	154	162	410	148	22	19	39
MIN	3.0	9.6	9.9	15	16	17	19	15	12	7.8	4.7	3.6
CFSM	.26	.63	.63	.71	2.41	1.29	1.22	1.94	.93	.34	.25	.27
IN.	.30	.70	.72	.82	2.51	1.49	1.37	2.24	1.04	.39	.29	.30

CAL YR 1970 TOTAL 8,799.1 MEAN 24.1 MAX 467 MIN 3.0 CFSM .79 IN 10.66
WTR YR 1971 TOTAL 10,035.1 MEAN 27.5 MAX 410 MIN 3.0 CFSM .90 IN 12.16

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 8	0900	7.60	511	5-30	1700	7.79	551
5-16	2100	6.47	346				

02052000 MEHERRIN RIVER AT EMPORIA, VA.

LOCATION (revised).--Lat 36°41'24", long 77°32'27", Emporia City, on left bank at downstream side of bridge on U.S. Highway 301 and 1.2 miles upstream from Falling Run.

DRAINAGE AREA.--747 sq mi.

PERIOD OF RECORD.--January 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 67.17 ft above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--20 years, 592 cfs (10.76 inches per year).

EXTREMES.--Current year: Maximum discharge, 7,800 cfs June 1 (gage height, 19.96 ft, from high-water mark in well); minimum daily, 30 cfs Oct. 14, 15.

Period of record: Maximum discharge, 12,900 cfs Jan. 9, 1962 (gage height, 23.17 ft); minimum, 5.0 cfs Nov. 11, 1954 (gage height, 1.00 ft); minimum daily, 8 cfs Nov. 8-10, 1954.

Flood in August 1940 reached a stage of 31.5 ft (corrected), from floodmarks (discharge, about 40,000 cfs, from rating curve extended above 12,000 cfs on basis of record for station near Lawrenceville).

REMARKS.--Records good except those for period of no gage-height record, which are fair. Prior to November 1965, low and medium flow regulated by powerplant 0.8 mile above station. Water-quality records for the current year are included in this report.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	393	148	335	310	916	832	310	7,650	212	135	107
2	58	330	144	346	224	638	638	288	4,940	294	218	87
3	53	260	143	358	167	822	590	291	1,470	302	200	77
4	48	150	144	358	310	3,330	566	346	720	322	179	73
5	41	120	135	390	567	4,360	590	346	566	335	566	70
6	35	115	136	1,990	1,500	2,040	967	322	489	210	664	103
7	34	110	129	1,850	2,320	1,060	3,640	283	438	185	458	120
8	33	130	128	664	4,990	804	5,000	310	390	176	256	81
9	33	120	126	478	7,000	664	2,600	380	369	176	179	66
10	32	110	130	438	7,160	566	1,230	500	335	165	142	63
11	32	167	134	428	3,970	522	832	400	310	156	120	69
12	31	561	138	428	1,320	500	664	322	291	155	105	161
13	31	780	142	438	1,180	478	590	400	286	144	109	795
14	30	777	144	428	2,930	458	544	614	322	141	179	1,120
15	30	500	142	400	3,300	458	500	1,000	370	135	128	409
16	35	2,190	153	369	1,370	522	458	1,740	430	124	96	210
17	40	1,220	271	346	860	468	438	5,020	590	115	83	148
18	45	418	468	322	664	428	428	6,270	489	114	113	120
19	40	288	478	302	590	400	409	2,910	428	126	134	106
20	37	233	322	256	533	409	390	832	380	134	121	101
21	50	208	274	199	500	418	380	748	335	131	116	105
22	76	222	422	250	478	438	369	566	369	111	107	128
23	165	197	1,300	288	671	400	358	478	532	101	92	170
24	188	177	790	322	2,130	369	358	409	804	95	86	171
25	110	163	533	358	1,000	358	380	369	664	93	76	138
26	80	155	418	390	638	358	358	346	478	111	72	116
27	65	153	346	380	664	400	322	322	320	134	96	104
28	58	150	299	310	944	522	322	369	240	163	163	97
29	54	149	236	212	------	1,110	335	1,230	220	182	369	93
30	84	149	182	283	------	2,170	335	3,500	206	164	243	115
31	183	------	208	335	------	1,430	------	7,400	------	144	142	------
TOTAL	1,901	10,695	8,763	14,251	48,290	27,816	25,423	38,621	25,431	5,151	5,747	5,323
MEAN	61.3	357	283	460	1,725	897	847	1,246	848	166	185	177
MAX	188	2,190	1,300	1,990	7,160	4,360	5,000	7,400	7,650	335	664	1,120
MIN	30	110	126	199	167	358	322	283	206	93	72	63
CFSM	.08	.48	.38	.62	2.31	1.20	1.13	1.67	1.14	.22	.25	.24
IN.	.09	.53	.44	.71	2.40	1.39	1.27	1.92	1.27	.26	.29	.27

CAL YR 1970 TOTAL 164,998 MEAN 452 MAX 4,220 MIN 30 CFSM .61 IN 8.22
WTR YR 1971 TOTAL 217,412 MEAN 596 MAX 7,650 MIN 30 CFSM .80 IN 10.83

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-10	1200	19.50	7,400	6- 1	UNKNOWN	19.96	7,800
5-18	1500	18.35	6,580				

NOTE.--NO GAGE-HEIGHT RECORD MAY 30 TO JUNE 1.

02052500 FONTAINE CREEK NEAR BRINK, VA.

LOCATION.--Lat 36°36'55", long 77°42'00", Greensville County, on left bank 30 ft upstream from bridge on State Highway 603, 0.3 mile downstream from Quarrel Creek, 3.6 miles (revised) west of Brink, and 10 miles southwest of Emporia.

DRAINAGE AREA.--65.2 sq mi.

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 152.59 ft above mean sea level.

AVERAGE DISCHARGE.--18 years, 57.8 cfs (12.04 inches per year).

EXTREMES.--Current year: Maximum discharge, 881 cfs May 31 (gage height, 10.80 ft); no flow Oct. 1-22.
Period of record: Maximum discharge, 2,660 cfs May 7, 1958 (gage height, 18.18 ft), from rating curve extended above 1,200 cfs; no flow at times in some years.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	7.0	5.6	26	19	76	86	28	334	10	3.5	3.2
2	0	5.5	5.6	29	16	64	66	26	152	22	2.9	2.8
3	0	4.8	5.6	25	16	144	76	29	70	14	2.7	2.7
4	0	3.9	5.6	21	30	375	67	39	44	8.7	2.6	2.5
5	0	3.1	5.4	45	142	259	52	32	32	6.6	45	2.4
6	0	2.6	5.2	53	262	164	265	26	25	6.0	36	2.3
7	0	2.5	5.4	39	226	100	500	22	20	5.7	16	3.0
8	0	2.6	5.4	29	574	76	310	23	16	6.2	8.9	11
9	0	2.8	5.4	27	655	62	170	31	15	5.8	6.3	5.0
10	0	3.0	5.4	30	378	53	130	29	13	5.2	5.2	3.4
11	0	4.3	5.7	37	207	52	100	21	12	4.8	4.4	3.4
12	0	11	6.1	42	123	49	85	19	11	4.9	3.9	12
13	0	11	6.6	35	192	45	75	99	12	5.2	3.6	39
14	0	12	6.6	30	320	42	70	116	12	4.8	3.3	28
15	0	11	6.3	28	229	44	60	51	20	5.6	3.1	11
16	0	10	7.1	27	172	52	55	452	52	5.4	2.9	6.3
17	0	9.2	17	25	104	79	53	401	85	4.5	2.8	4.8
18	0	8.0	22	23	85	57	49	150	51	3.9	3.3	3.9
19	0	7.3	18	22	73	46	44	59	27	3.6	4.4	3.5
20	0	6.6	14	18	68	49	42	36	20	4.3	4.8	3.2
21	0	6.6	15	16	65	43	40	31	16	4.4	4.4	3.0
22	0	7.1	31	18	61	37	40	27	24	3.8	3.6	18
23	3.0	7.1	31	22	80	35	37	20	67	3.7	3.5	35
24	.90	6.3	32	28	71	32	37	17	94	3.5	3.3	16
25	.40	5.7	26	42	57	29	37	15	32	6.0	2.8	9.2
26	.30	5.4	22	40	50	32	34	14	19	8.2	2.4	6.3
27	.20	5.4	18	32	90	46	31	12	14	5.2	2.8	5.0
28	.20	5.4	16	25	100	108	31	41	11	4.3	5.7	4.4
29	1.0	5.4	14	22	------	229	36	291	8.9	3.8	6.0	4.0
30	7.0	5.6	13	23	------	220	32	636	7.7	4.0	4.9	4.0
31	9.0	------	15	23	------	135	------	696	------	4.0	3.8	------
TOTAL	22.00	188.2	397.0	902	4,465	2,874	2,710	3,489	1,316.6	188.1	208.9	258.3
MEAN	.71	6.27	12.8	29.1	159	92.7	90.3	113	43.9	6.07	6.74	8.61
MAX	9.0	12	32	53	655	375	500	696	334	22	45	39
MIN	0	2.5	5.2	16	16	29	31	12	7.7	3.5	2.4	2.3
CFSM	.01	.10	.20	.45	2.44	1.42	1.39	1.73	.67	.09	.10	.13
IN.	.01	.11	.23	.51	2.55	1.64	1.55	1.99	.75	.11	.12	.15

CAL YR 1970 TOTAL 14,167.13 MEAN 38.8 MAX 547 MIN 0 CFSM .60 IN 8.08
WTR YR 1971 TOTAL 17,019.00 MEAN 46.6 MAX 696 MIN 0 CFSM .71 IN 9.71

PEAK DISCHARGE (BASE, 850 CFS).--MAY 31 (0330) 881 CFS (10.80 FT).

02053800 SOUTH FORK ROANOKE RIVER NEAR SHAWSVILLE, VA.

LOCATION.--Lat 37°08'24", long 80°16'00", Montgomery County, on left bank at bridge on State Highway 637, 0.3 mile downstream from Georges Run, 1.3 miles downstream from Elliott Creek, and 2.0 miles southwest of Shawsville.

DRAINAGE AREA.--110 sq mi.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,361.87 ft above mean sea level.

AVERAGE DISCHARGE.--11 years, 88.5 cfs (10.93 inches per year).

EXTREMES.--Current year: Maximum discharge, 921 cfs June 6 (gage height, 3.01 ft); minimum, 13 cfs Oct. 5-7 (gage height, 0.53 ft).

Period of record: Maximum discharge, 3,340 cfs Mar. 7, 1967 (gage height, 6.35 ft), from rating curve extended above 2,600 cfs; minimum, 7.5 cfs July 27-29, 1966 (gage height, 0.37 ft).

Flood of Sept. 30, 1959, reached a stage of 9.89 ft, from information by local resident.

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WRD Va. 1969: 1967(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	244	44	41	40	100	64	68	300	73	86	28
2	16	153	44	42	36	105	64	66	202	73	82	134
3	15	108	44	46	36	175	64	71	146	64	79	52
4	15	91	42	50	38	237	59	62	113	57	155	41
5	14	91	41	196	170	189	57	59	91	54	189	36
6	14	94	40	146	232	162	104	88	120	68	108	35
7	14	79	32	105	184	143	196	172	393	71	86	32
8	15	73	36	79	298	125	307	276	237	57	75	32
9	16	62	40	73	230	102	377	216	165	56	75	31
10	22	62	41	66	159	97	336	156	134	52	73	29
11	24	143	40	61	137	94	237	119	110	50	68	67
12	24	158	41	59	105	86	182	108	119	66	73	151
13	23	279	41	57	456	79	149	347	116	52	54	128
14	23	162	36	71	358	75	128	321	100	49	49	61
15	24	125	36	68	234	84	110	248	91	46	46	47
16	26	91	40	57	169	86	100	310	248	66	41	41
17	29	77	52	56	134	77	91	286	189	49	42	40
18	30	68	49	54	113	73	84	216	153	44	52	40
19	32	64	42	46	105	75	79	165	131	49	52	50
20	32	68	41	42	119	73	77	170	119	49	44	236
21	60	75	74	49	116	66	77	209	119	41	40	192
22	40	62	137	57	158	64	77	143	108	41	50	131
23	22	61	105	77	290	64	75	119	161	38	52	120
24	18	47	86	59	216	59	77	100	146	40	40	137
25	17	59	73	62	169	57	66	99	108	47	35	91
26	17	54	68	71	143	62	62	79	89	42	34	75
27	17	52	49	86	134	64	61	73	79	40	34	66
28	18	52	46	108	110	77	105	102	73	35	36	59
29	23	47	44	68	------	82	79	209	68	99	32	56
30	111	47	42	55	------	71	73	792	86	105	29	52
31	384	------	42	44	------	68	------	544	------	159	28	------
TOTAL	1,151	2,948	1,588	2,151	4,679	2,971	3,617	5,983	4,314	1,832	1,939	2,290
MEAN	37.1	94.9	51.2	69.4	167	95.8	121	193	144	59.1	62.5	76.3
MAX	384	279	137	196	456	237	377	792	393	159	189	236
MIN	14	47	32	41	36	57	57	59	68	35	28	28
CFSM	.34	.86	.47	.63	1.52	.87	1.10	1.75	1.31	.54	.57	.69
IN.	.39	.96	.54	.73	1.58	1.00	1.22	2.02	1.46	.62	.66	.77

CAL YR 1970 TOTAL 25,153 MEAN 68.9 MAX 660 MIN 14 CFSM .63 IN 8.51
WTR YR 1971 TOTAL 35,363 MEAN 96.9 MAX 792 MIN 14 CFSM .88 IN 11.96

PEAK DISCHARGE (BASE, 800 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-30	1200	2.93	896	6- 6	2200	3.01	921

02054500 ROANOKE RIVER AT LAFAYETTE, VA.

LOCATION (revised).--Lat 37°14'11", long 80°12'34", Montgomery County, on right bank 120 ft upstream from bridge on State Highway 603 at Lafayette, 0.4 mile downstream from confluence of North and South Forks, and 1.1 miles upstream from Cove Hollow.

DRAINAGE AREA.--257 sq mi.

PERIOD OF RECORD.--September 1943 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,174.47 ft above mean sea level. Prior to July 30, 1949, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--28 years, 229 cfs (12.10 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,350 cfs May 30 (gage height, 5.97 ft); minimum, 32 cfs Oct. 6-8 (gage height, 0.95 ft).

Period of record: Maximum discharge, 15,600 cfs Sept. 30, 1959 (gage height, 11.56 ft), from rating curve extended above 12,000 cfs; minimum daily, 10 cfs Jan. 14, 15, 18, 19, 1959.

Flood in August 1940 reached a stage of 12.2 ft, from information by local residents (discharge, 19,000 cfs from rating curve extended above 12,000 cfs).

REMARKS.--Records good. Occasional diurnal fluctuation caused by meat processing plant above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1333: 1944-47(M), 1948-49.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	390	75	45	80	270	188	121	1,040	113	142	51
2	36	274	72	66	75	278	162	113	668	113	185	127
3	34	220	68	68	80	653	158	135	483	110	172	84
4	34	195	66	70	90	1,040	142	132	385	108	197	66
5	33	185	61	300	437	668	135	127	321	105	325	61
6	32	172	64	346	785	532	351	172	300	105	158	57
7	32	142	57	241	666	450	1,130	521	1,020	139	127	55
8	32	121	57	185	1,090	365	1,150	1,080	554	108	97	51
9	33	108	66	165	830	300	1,070	716	420	102	84	49
10	34	105	66	142	465	285	890	472	325	100	70	49
11	36	220	64	129	375	270	698	350	281	95	82	59
12	38	328	66	124	342	241	549	325	263	118	100	212
13	36	808	68	121	1,390	223	430	1,320	241	100	75	212
14	34	375	61	168	1,320	209	350	1,010	205	87	68	97
15	36	263	59	185	800	209	300	740	198	82	64	72
16	36	198	61	162	566	216	259	980	912	102	61	64
17	34	158	75	145	430	188	230	800	456	84	61	61
18	34	132	82	142	360	175	198	596	346	75	61	55
19	36	118	72	113	312	175	182	456	300	79	66	59
20	37	121	68	100	333	172	178	375	325	75	57	298
21	55	139	132	113	333	155	168	516	270	64	53	274
22	79	116	410	129	450	152	165	360	241	61	51	185
23	49	108	270	248	950	145	152	297	263	57	66	148
24	42	89	209	234	632	132	155	259	263	53	57	185
25	40	79	165	220	478	127	132	230	209	59	55	124
26	38	95	132	274	400	142	118	205	178	55	55	100
27	38	89	102	205	355	145	113	182	155	53	55	89
28	38	87	89	160	300	198	195	241	129	49	55	72
29	42	82	79	130	------	220	155	583	116	66	53	70
30	134	79	64	110	------	198	132	2,710	124	173	53	66
31	556	------	50	90	------	182	------	1,710	------	248	53	------
TOTAL	1,805	5,596	3,030	4,930	14,724	8,715	10,235	17,834	10,991	2,930	2,858	3,152
MEAN	58.2	187	97.7	159	526	281	341	575	366	94.8	92.2	105
MAX	556	808	410	346	1,390	1,040	1,150	2,710	1,040	248	325	298
MIN	32	79	50	45	75	127	113	113	116	49	51	49
CFSM	.23	.73	.38	.62	2.05	1.09	1.33	2.24	1.42	.37	.36	.41
IN.	.26	.81	.44	.71	2.13	1.26	1.48	2.58	1.59	.43	.41	.46

CAL YR 1970 TOTAL 52,617 MEAN 144 MAX 1,660 MIN 32 CFSM .56 IN 7.62
WTR YR 1971 TOTAL 86,808 MEAN 238 MAX 2,710 MIN 32 CFSM .93 IN 12.57

PEAK DISCHARGE (BASE, 3,500 CFS).--NO PEAK ABOVE BASE.

02055000 ROANOKE RIVER AT ROANOKE, VA.

LOCATION.--Lat 37°15'30", long 79°56'20", Roanoke City, on left bank 50 ft downstream from Walnut Street Bridge 3.2 miles upstream from Tinker Creek, and at mile 360.6.

DRAINAGE AREA.--395 sq mi.

PERIOD OF RECORD.--February 1899 to current year. Monthly discharge only for some periods, published in WSP 1303. Records for July 1896 to January 1899 published in WSP 11, 15, and 27, and 20th Annual Report, Part 4 are unreliable, due to doubtful gage-height record, and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 906.84 ft above mean sea level (levels by Corps of Engineers). Prior to June 7, 1937, nonrecording gage on downstream side of highway bridge 50 ft upstream at same datum.

AVERAGE DISCHARGE.--72 years, 368 cfs (12.65 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,110 cfs May 30 (gage height, 6.84 ft); minimum, 33 cfs Oct. 4, 14 (gage height, 0.37 ft).

Period of record: Maximum discharge, 26,400 cfs Aug. 14, 1940 (gage height, 18.25 ft), from rating curve extended above 15,000 cfs on basis of slope-area measurement of peak flow, and records for other stations in Roanoke River basin; practically no flow Dec. 23, 1909, Dec. 19, 1963, when flow was retarded by freezing (gage height, 0.0 ft); minimum daily, 27 cfs Feb. 20, 1934.

REMARKS.--Records good. Prior to 1949, diurnal fluctuation at low flow caused by powerplants above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 972: 1928, 1930, 1933. WSP 1433: 18[illegible]-19[illegible], 1914-17(M), 1918-24, 1925-34(M), 1935, 1936-40(M). WRD Va. 1970: Drainage area. See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	1,300	131	162	160	362	246	224	1,520	218	457	72
2	41	741	123	152	120	367	234	220	953	239	387	122
3	41	473	120	159	130	724	229	225	694	245	311	159
4	39	462	116	159	150	1,490	215	221	563	179	259	99
5	40	395	111	361	228	950	203	206	470	163	443	89
6	37	322	110	644	942	723	299	230	403	237	289	85
7	37	274	108	453	785	612	1,320	437	907	199	225	78
8	36	238	99	340	1,330	510	1,780	1,060	688	166	183	73
9	37	205	102	289	1,270	415	1,510	938	449	149	154	69
10	43	247	107	258	684	372	1,210	621	397	143	137	69
11	46	672	107	233	523	350	858	477	311	162	145	207
12	45	644	115	214	491	317	637	401	302	159	173	282
13	45	1,310	112	203	2,180	294	522	1,440	294	157	136	328
14	40	727	108	224	2,530	277	436	1,400	261	136	118	180
15	41	495	101	258	1,210	269	373	927	274	129	112	129
16	39	350	129	243	812	273	338	1,190	1,170	133	107	111
17	37	287	125	222	610	250	314	1,080	735	151	105	104
18	39	256	132	218	537	235	295	798	533	126	116	105
19	40	224	130	196	454	233	276	615	433	125	119	112
20	43	234	114	148	461	233	259	535	425	129	110	420
21	143	230	201	158	482	224	253	590	374	118	100	472
22	92	204	603	181	534	212	254	499	326	109	99	314
23	80	187	493	246	1,300	205	242	401	325	104	110	246
24	63	174	375	301	922	199	246	350	361	107	104	254
25	57	148	304	269	665	190	232	322	287	106	92	216
26	54	158	263	319	547	213	217	294	256	112	87	182
27	51	153	222	300	493	209	206	270	231	109	95	161
28	48	147	201	231	415	252	256	361	213	102	85	145
29	70	143	177	253	------	297	266	627	224	143	85	134
30	539	136	157	266	------	290	232	3,970	231	187	79	126
31	2,140	------	167	251	------	264	------	2,860	------	274	74	------
TOTAL	4,146	11,536	5,463	7,911	20,965	11,811	13,958	23,789	14,610	4,816	5,096	5,143
MEAN	134	385	176	255	749	381	465	767	487	155	164	171
MAX	2,140	1,310	603	644	2,530	1,490	1,780	3,970	1,520	274	457	472
MIN	36	136	99	148	120	190	203	206	213	102	74	69
CFSM	.34	.97	.45	.65	1.90	.96	1.18	1.94	1.23	.39	.42	.43
IN.	.39	1.09	.51	.75	1.97	1.11	1.31	2.24	1.38	.45	.48	.48

CAL YR 1970 TOTAL 81,534 MEAN 223 MAX 2,270 MIN 36 CFSM .56 IN 7.68
WTR YR 1971 TOTAL 129,244 MEAN 354 MAX 3,970 MIN 36 CFSM .90 IN 12.17

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	2330	6.00	4,100	5-30	1330	6.84	5,110

02055100 TINKER CREEK NEAR DALEVILLE, VA.

LOCATION.--Lat 37°25'03", long 79°56'08", Botetourt County, on left bank 300 ft downstream from footbridge, 1,100 ft downstream from Norfolk & Western Railway bridge, 0.2 mile downstream from unnamed tributary, 0.5 mile south of Glebe Mills, and 1.3 miles northwest of Daleville.

DRAINAGE AREA.--11.7 sq mi.

PERIOD OF RECORD.--April 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,217.47 ft above mean sea level (Norfolk & Western Railway bench mark).

AVERAGE DISCHARGE.--15 years, 10.5 cfs (12.19 inches per year).

EXTREMES.--Current year: Maximum discharge, 604 cfs Feb. 13 (gage height, 5.28 ft), from rating curve extended as explained below; minimum, 1.9 cfs Oct. 1, 2, 3 (gage height, 1.28 ft).

Period of record: Maximum discharge, 2,180 cfs Aug. 25, 1961 (gage height, 8.52 ft), from rating curve extended above 100 cfs on basis of slope-area measurement of peak flow; minimum, 0.20 cfs Jan. 24, 1961, result of freezeup; minimum daily, 0.90 cfs July 26, 1966; minimum gage height, 0.99 ft June 12, 24, 1970.

Flood in 1940 reached a stage of 9.0 ft, from information by local resident.

REMARKS.--Records fair except those for period of no gage-height record, which are poor. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1904: 1958-60(M, P). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	40	8.9	11	7.5	17	10	8.3	45	10	13	5.2
2	2.0	22	8.5	10	7.8	19	10	8.3	35	16	14	5.2
3	2.1	39	8.3	9.5	8.0	47	9.8	8.3	25	15	11	5.2
4	2.4	38	8.0	9.0	8.4	38	9.4	8.1	20	10	19	5.6
5	2.4	34	8.2	19	12	28	9.4	8.1	16	8.3	14	6.4
6	2.4	22	8.0	15	25	25	14	8.7	13	17	10	5.9
7	2.3	18	7.8	11	30	23	40	10	27	12	8.3	5.4
8	2.4	15	7.8	10	45	21	32	11	22	9.4	7.8	5.4
9	2.5	13	7.8	9.8	37	19	28	8.7	15	9.0	7.3	5.2
10	2.8	26	7.7	9.7	25	18	22	8.7	13	16	7.1	4.9
11	2.8	65	7.7	9.7	23	18	19	7.8	10	39	6.9	7.8
12	3.0	33	7.6	11	35	17	18	8.7	11	19	7.1	8.1
13	3.1	40	7.6	11	250	16	16	27	10	13	6.6	6.9
14	3.3	26	7.2	13	110	15	14	15	9.4	11	5.7	5.7
15	3.8	22	6.8	15	70	15	16	14	47	10	5.9	5.6
16	3.7	18	7.4	13	45	14	15	23	68	9.0	5.6	5.4
17	3.8	16	8.0	12	30	13	13	16	36	8.3	5.7	5.7
18	3.8	15	8.6	11	22	12	12	14	25	8.1	5.9	5.9
19	3.6	14	8.0	10	22	13	12	12	20	8.3	5.9	6.1
20	3.7	19	7.6	9.5	23	12	11	11	18	7.8	5.6	14
21	6.0	15	15	9.4	21	12	11	12	16	8.1	5.6	13
22	4.1	14	30	10	29	12	11	9.8	14	7.6	6.1	6.1
23	3.8	13	25	11	33	11	11	9.0	15	7.1	5.9	5.4
24	3.7	12	21	10	25	11	10	9.0	14	7.1	5.6	9.0
25	3.6	11	18	9.8	22	11	9.0	8.3	13	7.3	5.4	4.5
26	3.6	11	16	13	21	12	8.7	7.6	12	7.6	5.2	4.4
27	3.7	11	14	12	21	12	9.4	7.3	11	7.1	5.4	4.4
28	4.0	10	12	11	18	13	11	11	10	7.1	5.4	4.2
29	5.3	9.6	11	12	------	12	8.3	18	10	6.9	5.4	4.2
30	51	9.3	10	13	------	11	8.3	150	9.8	7.3	5.4	4.2
31	134	------	10	11	------	11	------	70	------	9.0	5.1	------
TOTAL	280.7	650.9	339.5	351.4	1,025.7	528	428.3	548.7	610.2	338.4	232.9	180.8
MEAN	9.05	21.7	11.0	11.3	36.6	17.0	14.3	17.7	20.3	10.9	7.51	6.03
MAX	134	65	30	19	250	47	40	150	68	39	19	14
MIN	2.0	9.3	6.8	9.0	7.5	11	8.3	7.3	9.4	6.9	5.1	4.2
CFSM	.77	1.85	.94	.97	3.13	1.45	1.22	1.51	1.74	.93	.64	.52
IN.	.89	2.07	1.08	1.12	3.26	1.68	1.36	1.74	1.94	1.08	.74	.57

CAL YR 1970 TOTAL 3,418.5 MEAN 9.37 MAX 134 MIN 1.8 CFSM .80 IN 10.87
WTR YR 1971 TOTAL 5,515.5 MEAN 15.1 MAX 250 MIN 2.0 CFSM 1.29 IN 17.56

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	0115	4.85	481	6-15	1830	4.26	333
2-13	UNKNOWN	5.28	604	7-10	2400	4.03	286
5-30	0430	4.00	280				

NOTE.--NO GAGE-HEIGHT RECORD JAN. 15 TO FEB. 18.

02056000 ROANOKE RIVER AT NIAGARA, VA.

LOCATION.--Lat 37°15'18", long 79°52'18", Roanoke County, on right bank 200 ft downstream from powerplant of Appalachian Power Co. at Niagara, 2 miles downstream from Tinker Creek, 2.1 miles southeast of Vinton, and at mile 355.3.

DRAINAGE AREA.--512 sq mi.

PERIOD OF RECORD.--July 1926 to current year.

GAGE.--Water-stage recorder. Datum of gage is 820.15 ft above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--45 years, 495 cfs (13.13 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,500 cfs May 30 (gage height, 10.06 ft); minimum, 2.0 cfs Aug. 25 (gage height, 0.17 ft); minimum daily, 84 cfs Oct. 15.

Period of record: Maximum discharge, 35,000 cfs Aug. 14, 1940 (gage height, 17.5 ft, from floodmark), from rating curve extended above 12,000 cfs on basis of velocity-area study by Geological Survey, unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in the Roanoke River basin; minimum, 1.0 cfs Oct. 16, 20, 1956; minimum daily, 8 cfs Oct. 9, 1954; minimum gage height, 0.17 ft Aug. 25, 1971.

REMARKS.--Records good. Flow regulated by dam and powerplant 200 ft above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 892: 1928(M), 1930(M), 1933(M), 1935-36(M), 1938(M). WSP 972: 1927(M), 1929(M), 1934(M), 1937(M). WSP 1303: 1928, 1930, 1933-38, 1940. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	1,510	227	267	270	592	435	253	1,810	334	769	154
2	103	988	228	263	200	631	388	306	1,220	377	739	217
3	99	678	218	265	220	1,090	360	327	926	455	528	254
4	102	734	210	269	250	1,820	334	290	743	329	555	182
5	103	691	153	529	402	1,310	319	251	627	274	784	174
6	102	538	191	887	1,060	1,060	486	302	546	543	545	153
7	100	459	194	632	1,030	910	1,510	515	1,030	413	428	182
8	105	383	191	493	1,620	771	2,040	1,140	995	374	377	152
9	101	331	180	446	1,590	651	1,760	1,040	619	223	307	154
10	101	425	194	398	948	595	1,460	763	590	352	286	157
11	101	1,080	196	367	767	557	1,110	589	474	334	282	336
12	106	936	202	350	749	529	877	527	469	333	375	495
13	108	1,570	190	339	3,410	484	716	1,600	449	323	282	506
14	110	974	189	368	3,210	453	636	1,580	410	286	212	295
15	84	710	179	405	1,690	460	550	1,160	413	245	220	243
16	95	533	250	385	1,220	436	503	1,500	1,590	256	220	233
17	95	454	232	350	943	403	466	1,340	1,170	261	226	188
18	93	414	231	334	799	391	432	1,040	849	201	229	233
19	107	364	219	330	731	381	405	811	686	267	280	216
20	100	417	202	258	719	378	385	818	647	209	199	538
21	311	372	398	264	747	347	382	817	583	223	200	641
22	186	351	759	292	854	336	345	658	513	205	207	424
23	169	306	681	390	1,590	301	347	537	515	197	202	397
24	136	331	531	434	1,250	383	345	476	539	253	209	373
25	129	268	445	411	981	288	338	432	442	182	209	342
26	97	260	395	454	823	382	303	398	391	205	154	315
27	133	238	349	446	784	346	291	399	378	204	209	269
28	101	289	332	334	669	390	325	463	326	199	194	226
29	162	256	286	366	------	428	377	843	322	324	171	236
30	969	243	261	399	------	375	321	4,950	385	338	177	224
31	2,610	------	276	360	------	400	------	3,360	------	480	165	------
TOTAL	7,060	17,103	8,829	12,085	29,426	17,868	18,526	29,455	20,656	9,199	9,940	8,481
MEAN	228	570	285	390	1,051	576	618	950	689	297	321	283
MAX	2,610	1,570	759	887	3,410	1,820	2,040	4,950	1,810	543	784	641
MIN	84	238	179	258	200	288	291	251	322	182	154	152
CFSM	.45	1.11	.56	.76	2.05	1.13	1.21	1.86	1.35	.58	.63	.55
IN.	.51	1.24	.64	.88	2.14	1.30	1.35	2.14	1.50	.67	.72	.62

CAL YR 1970 TOTAL 122,380 MEAN 335 MAX 2,610 MIN 54 CFSM .65 IN 8.89
WTR YR 1971 TOTAL 188,628 MEAN 517 MAX 4,950 MIN 84 CFSM 1.01 IN 13.71

PEAK DISCHARGE (BASE, 3,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	2100	9.35	5,490	5-30	1200	10.06	6,500

02058400 PIGG RIVER NEAR SANDY LEVEL, VA.

LOCATION.--Lat 36°56'45", long 79°31'30", Pittsylvania County, on left bank 300 ft downstream from Harpen Creek, 0.5 mile upstream from bridge on State Highway 40, and 1.1 miles south of Sandy Level.

DRAINAGE AREA.--350 sq mi.

PERIOD OF RECORD.--May 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 617.00 ft above mean sea level (Corps of Engineers bench mark). Prior to Nov. 18, 1963, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--8 years, 292 cfs (11.33 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,950 cfs Oct. 31 (gage height, 9.59 ft); minimum, 87 cfs Oct. 6, 7 (gage height, 2.31 ft).

Period of record: Maximum discharge, 14,900 cfs Aug. 31, 1964 (gage height, 21.11 ft); minimum, 40 cfs Aug. 21, 22, 24-26, 1963 (gage height, 2.00 ft).

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	1,560	226	200	212	363	282	244	573	432	221	158
2	102	713	221	358	180	379	282	244	438	501	200	158
3	102	537	212	358	212	744	307	244	384	638	253	162
4	97	728	212	307	257	1,460	277	235	353	465	200	162
5	92	900	196	1,980	312	668	267	230	333	302	267	162
6	90	454	196	1,740	561	507	394	253	338	267	217	155
7	90	358	196	660	645	443	1,280	400	307	257	196	152
8	92	312	192	465	1,500	394	795	585	307	244	180	148
9	95	282	196	400	1,320	363	501	400	333	226	172	148
10	97	277	200	368	573	348	410	312	302	363	169	141
11	97	513	200	343	471	338	363	277	292	244	184	192
12	104	537	204	338	410	322	338	272	282	230	438	525
13	107	513	212	327	1,670	317	322	2,890	374	226	262	519
14	102	405	200	333	1,930	307	307	1,520	312	212	180	272
15	102	549	192	333	720	322	292	653	287	196	165	196
16	107	443	221	307	531	368	287	3,040	454	184	158	169
17	102	353	471	287	454	307	282	1,300	525	184	155	188
18	97	317	338	282	416	287	277	623	374	176	348	192
19	99	297	277	272	400	302	272	477	338	217	363	192
20	104	292	253	226	389	348	267	410	312	244	230	262
21	188	343	302	287	384	302	267	405	317	192	188	253
22	384	302	683	297	638	287	277	368	302	176	192	262
23	184	272	460	282	3,430	282	272	327	292	172	348	272
24	138	253	374	277	1,030	272	307	312	322	165	239	253
25	129	235	317	287	573	262	277	307	292	176	184	221
26	126	235	287	287	477	292	253	302	267	192	169	196
27	121	239	262	253	443	312	244	282	257	184	230	184
28	121	235	248	208	400	368	307	343	248	172	248	180
29	124	230	277	287	------	368	327	698	244	172	192	176
30	645	226	244	297	------	333	262	2,220	465	217	165	169
31	4,460	------	244	267	------	297	------	1,050	------	221	162	------
TOTAL	8,605	12,910	8,313	12,913	20,558	12,262	10,595	21,223	10,224	7,847	6,875	6,419
MEAN	278	430	268	417	736	396	353	685	341	253	222	214
MAX	4,460	1,560	683	1,980	3,430	1,460	1,280	3,040	573	638	438	525
MIN	90	226	192	200	180	262	244	230	244	165	155	141
CFSM	.79	1.23	.77	1.19	2.10	1.13	1.01	1.96	.97	.72	.63	.61
IN.	.91	1.37	.88	1.37	2.19	1.30	1.13	2.26	1.09	.83	.73	.68

CAL YR 1970 TOTAL 111,831 MEAN 306 MAX 4,460 MIN 86 CFSM .87 IN 11.89
WTR YR 1971 TOTAL 138,784 MEAN 380 MAX 4,460 MIN 90 CFSM 1.09 IN 14.75

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	1700	9.59	4,950	5-13	1400	8.05	4,060
2-23	1100	8.83	4,500	5-16	1030	8.07	4,040

02059500 GOOSE CREEK NEAR HUDDLESTON, VA.

Location (revised).--Lat 37°10'23", long 79°31'14", Bedford County, on left bank 0.3 mile upstream from Haden Bridge on State Highway 732, 0.4 mile upstream from Rockcastle Creek, and 3.5 miles northwest of Huddleston.

DRAINAGE AREA.--188 sq mi.

PERIOD OF RECORD.--March 1925 to August 1928 (gage heights only), September 1930 to current year.

GAGE.--Water-stage recorder. Datum of gage is 592.91 ft above mean sea level. Mar. 15, 1925, to Aug. 4, 1928, nonrecording gage at site 1,300 ft downstream at different datum.

AVERAGE DISCHARGE.--41 years (1930-71), 168 cfs (12.14 inches per year).

EXTREMES.--Current year: Maximum discharge, 13,400 cfs Sept. 19 (gage height, 19.25 ft), from rating curve extended as explained below; minimum, 32 cfs Oct. 5, 6 (gage height, 1.09 ft).

Period of record: Maximum discharge, 20,300 cfs Oct. 19, 1937 (gage height, 25.75 ft, from floodmarks), from rating curve extended above 6,400 cfs on basis of slope-area measurements at gage heights 19.25 and 24.1 ft; minimum, 3 cfs Aug. 31, 1932, Jan. 30, 1934.

REVISIONS.--Figures of maximum discharge for the water years 1969 and 1970 have been revised to 4,580 cfs Aug. 20, 1969 (gage height, 9.76 ft) and 2,890 cfs Dec. 31, 1969 (gage height, 7.44 ft), superseding figures published in WRD Va., 1969 and 1970.

REMARKS.--Records good. Prior to October 1954, diurnal fluctuation at low flow caused by mill above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 892: 1933, 1935(M), 1939. WSP 972: 1931-32(M), 1934(M), 1935-38, 1940, 1941(M). WSP 1082: 1940(P). WSP 1142: 1938-40(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

CAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	736	92	76	78	190	126	106	437	193	165	83
2	37	296	86	100	78	200	126	103	280	214	186	83
3	37	437	86	200	130	366	126	109	232	265	197	83
4	34	775	8C	375	250	534	116	100	204	142	142	80
5	32	861	71	630	350	296	113	97	193	119	487	80
6	33	323	75	456	466	242	186	100	190	119	235	75
7	34	221	71	261	487	214	498	132	169	159	204	73
8	34	176	73	2C0	602	190	361	152	257	116	162	73
9	34	146	77	176	498	172	292	126	179	119	139	71
10	37	136	75	159	242	162	246	109	156	327	126	69
11	38	451	73	149	211	159	204	103	146	242	269	103
12	37	361	80	146	214	149	179	106	142	190	235	207
13	36	265	92	149	2,080	146	169	785	152	165	139	139
14	35	200	75	159	1,430	142	156	576	139	142	119	94
15	36	214	71	172	581	142	146	272	142	129	109	77
16	50	169	97	159	336	152	142	803	296	126	100	73
17	36	146	197	146	257	132	136	389	253	116	100	83
18	34	132	142	139	221	126	136	257	204	129	156	80
19	36	126	123	129	207	132	129	207	179	149	156	1,730
2C	37	126	1C9	92	211	139	126	183	162	119	136	1,010
21	86	169	159	86	207	123	126	296	156	103	109	224
22	116	139	288	94	353	119	126	197	149	94	103	190
23	52	129	214	139	989	116	119	165	319	92	106	165
24	44	116	179	129	399	113	123	152	211	106	94	152
25	42	106	152	123	303	109	113	146	159	156	89	139
26	42	105	139	142	270	129	109	139	149	113	86	129
27	41	103	12C	119	240	132	106	126	136	106	492	126
28	41	100	105	98	215	162	129	162	129	92	142	119
29	43	97	95	115	------	159	119	269	432	92	97	116
30	366	94	90	142	------	142	106	2,110	242	250	89	113
31	2,820	------	82	126	------	132	------	1,000	------	186	86	------
TCTAL	4,418	7,455	3,468	5,386	11,905	5,421	4,889	9,577	6,194	4,670	5,055	5,839
MEAN	143	249	112	174	425	175	163	309	20	151	163	195
MAX	2,820	861	288	630	2,080	534	498	2,110	437	327	492	1,730
MIN	32	94	71	76	78	109	106	97	129	92	86	69
CFSM	.75	1.32	.60	.93	2.26	.93	.87	1.64	1.10	.80	.87	1.04
IN.	.87	1.48	.69	1.07	2.36	1.07	.97	1.90	1.23	.92	1.00	1.16

CAL YR 1970 TOTAL 47,315 MEAN 130 MAX 2,820 MIN 27 CFSM .69 IN 9.36
WTR YR 1971 TCTAL 74,277 MEAN 203 MAX 2,820 MIN 32 CFSM 1.08 IN 14.70

PEAK DISCHARGE (BASE, 2,300 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	0430	11.62	6,010	5-30	0900	8.43	3,560
2-13	1930	8.85	3,840	9-19	2130	19.25	13,400

02060500 ROANOKE (STAUNTON) RIVER AT ALTAVISTA, VA.

LOCATION.--Lat 37°06'16", long 79°17'44", Pittsylvania County, on right bank 12 ft upstream from bridge on U.S. Highway 29, 0.3 mile south of Altavista, 0.3 mile downstream from Sycamore Creek, 3.5 miles upstream from Big Otter River, and at mile 286.5.

DRAINAGE AREA.--1,789 sq mi.

PERIOD OF RECORD.--August 1930 to current year.

GAGE.--Water-stage recorder. Datum of gage is 503.10 ft above mean sea level. Prior to Feb. 21, 1951, on left bank 50 ft downstream at same datum.

AVERAGE DISCHARGE.--41 years, 1,813 cfs (13.76 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 15,900 cfs May 30 (gage height, 17.22 ft); minimum, 58 cfs Oct. 20 (gage height, 1.82 ft); minimum daily, 119 cfs Oct. 4.

Period of record: Maximum discharge, 105,000 cfs Aug. 15, 1940 (gage height, 40.08 ft, from floodmark), from rating curve extended above 52,000 cfs on basis of unit hydrograph and flood-routing studies by Corps of Engineers and records for other stations in Roanoke River basin; minimum, 13 cfs Jan. 30, 1966; minimum daily, 39 cfs July 10, 1966; minimum gage height, 1.66 ft Jan. 31, 1934, result of freezeup.

REMARKS.--Records good. Flow regulated since 1962 by Leesville Lake 9.5 miles upstream (see sta 02059400) and since 1963 by Smith Mountain Lake 27.5 miles upstream (see sta 02057400). Water-quality records for the current year are included in this report.

REVISIONS (WATER YEARS).--WSP 892: 1938(M). WSP 972: 1931-33. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	CEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	904	5,900	885	233	4,010	1,090	2,370	736	6,300	2,790	295	588
2	936	5,230	873	229	5,050	1,490	1,000	727	4,550	1,650	1,830	925
3	143	3,840	1,000	231	2,160	6,130	284	1,200	6,760	568	1,100	866
4	119	4,570	1,010	448	637	9,080	259	1,240	10,400	323	603	191
5	831	6,840	152	1,890	258	5,150	1,070	1,220	2,080	245	1,900	148
6	863	2,070	127	4,510	352	813	1,290	2,180	421	2,010	461	139
7	900	422	839	6,170	563	470	1,760	1,550	2,930	1,910	320	892
8	1,050	307	899	6,430	1,910	3,140	5,170	1,390	2,030	2,760	271	866
9	860	944	825	590	2,140	1,860	1,970	1,300	418	3,020	2,430	1,850
10	123	963	997	334	2,190	4,650	542	1,590	2,920	647	3,270	2,850
11	166	1,360	1,570	1,270	2,420	731	449	1,400	3,590	340	509	312
12	849	1,770	281	1,130	2,430	311	1,140	1,270	473	1,100	523	322
13	1,770	1,350	176	1,260	3,480	284	1,150	4,730	287	2,240	2,210	419
14	1,590	478	845	2,620	4,660	267	1,150	6,170	971	1,120	551	911
15	1,220	496	834	642	5,530	4,530	1,040	5,310	1,010	1,310	179	902
16	1,390	3,840	1,200	398	2,560	1,190	735	12,600	3,660	2,410	166	1,290
17	357	3,280	1,550	250	3,480	5,210	623	10,600	5,170	330	926	2,800
18	154	433	433	1,100	1,470	1,060	587	3,600	3,460	231	1,070	255
19	262	400	216	1,800	578	4,960	2,800	5,230	497	1,060	1,710	161
20	847	643	188	2,040	405	2,680	1,060	1,630	891	978	1,410	3,010
21	928	402	4,190	3,870	386	290	724	1,660	1,270	961	222	1,160
22	1,440	225	1,640	4,090	4,490	4,620	719	1,550	351	974	169	1,000
23	1,160	5,120	3,130	502	8,380	3,300	701	1,490	299	978	876	968
24	153	4,710	632	260	8,060	2,070	729	1,910	3,560	234	911	1,210
25	148	1,070	268	768	6,480	878	734	1,220	2,570	257	919	230
26	871	229	242	5,530	5,500	274	2,700	1,120	585	933	963	177
27	859	583	235	10,500	980	273	729	1,090	247	967	1,340	834
28	888	381	1,080	10,400	453	313	726	1,190	3,590	925	371	897
29	2,650	164	1,200	4,940	------	1,060	722	2,760	2,650	931	181	922
30	1,320	871	2,130	369	------	1,040	1,270	11,600	3,140	1,180	892	1,050
31	6,240	------	416	293	------	1,130	------	12,000	------	283	926	------
TOTAL	31,991	58,891	30,063	75,097	81,452	70,344	36,203	103,463	77,080	35,665	29,504	28,545
MEAN	1,032	1,963	970	2,422	2,909	2,269	1,207	3,338	2,569	1,150	952	952
MAX	6,240	6,840	4,190	10,500	8,360	9,080	5,170	12,600	10,400	3,020	3,270	3,010
MIN	119	164	127	229	258	267	259	727	247	231	166	139
(*)	+227	+10	-46	-779	+860	-351	+618	+13	-611	+13	+54	+48
MEAN‡	1,259	1,973	924	1,643	3,769	1,918	1,825	3,351	1,958	1,163	1,006	1,000
CFSM‡	.70	1.10	.52	.92	2.11	1.07	1.02	1.87	1.09	.65	.56	.56
IN.‡	.81	1.23	.60	1.06	2.20	1.23	1.14	2.16	1.22	.75	.65	.62

CAL YR 1970 TOTAL 456,102 MEAN 1,250 MAX 13,200 MIN 84 MEAN‡ 1,229 CFSM‡ .69 IN.‡ 9.32
WTR YR 1971 TOTAL 658,298 MEAN 1,804 MAX 12,600 MIN 119 MEAN‡ 1,781 CFSM‡ 1.00 IN.‡ 13.51

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN SMITH MOUNTAIN AND LEESVILLE LAKES; FURNISHED BY APPALACHIAN POWER CO.

‡ ADJUSTED FOR CHANGE IN CONTENTS.

02061500 BIG OTTER RIVER NEAR EVINGTON, VA.

LOCATION.--Lat 37°12'30", long 79°18'14", Campbell County, on right bank 10 ft upstream from bridge on State Highway 682, 2.0 miles southwest of Evington, and 2.1 miles upstream from Flat Creek.

DRAINAGE AREA.--320 sq mi.

PERIOD OF RECORD.--October 1936 to current year. Monthly discharge only for some periods, published in WSP 1303. Prior to October 1965, published as Otter River near Evington.

GAGE.--Water-stage recorder. Datum of gage is 544.02 ft above mean sea level.

AVERAGE DISCHARGE.--35 years, 320 cfs (13.58 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,510 cfs May 30 (gage height, 15.52 ft); minimum, 28 cfs Oct. 5, 6 (gage height, 0.90 ft).

Period of record: Maximum discharge, 27,500 cfs Oct. 19, 1937, Aug. 19, 1939 (gage height, 23.1 ft), from rating curve extended above 7,000 cfs on basis of unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; minimum, 7.5 cfs Sept. 14, 1966; minimum gage height, 0.63 ft Sept. 12-14, 1966.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 852: 1937. WSP 892: 1938-39(M). WSP 972: 1937-39. WSP 1032: 1940. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	1,040	160	1,000	172	378	258	190	764	300	264	99
2	35	614	156	1,300	162	395	252	188	566	395	254	99
3	35	713	151	1,150	180	716	258	193	468	923	320	98
4	31	794	146	950	230	1,090	237	188	398	322	217	97
5	29	986	127	1,550	340	665	230	179	342	245	236	90
6	28	507	133	820	500	551	327	181	412	220	246	87
7	29	373	127	500	860	482	1,060	227	298	320	239	82
8	30	302	130	380	1,050	425	788	272	415	250	193	82
9	31	259	138	340	890	382	537	217	388	219	167	80
10	33	243	133	310	450	358	453	186	270	596	156	77
11	34	836	130	290	400	342	400	171	242	331	155	90
12	36	688	143	270	410	318	368	174	229	294	263	402
13	39	518	160	260	3,300	302	342	1,360	252	262	172	554
14	36	399	137	270	2,700	292	313	990	232	216	156	208
15	36	601	130	295	1,350	292	288	545	274	195	152	148
16	49	423	167	280	820	330	278	1,450	518	191	131	123
17	47	328	350	260	600	276	267	779	470	198	119	113
18	36	280	255	250	490	256	259	530	338	167	142	111
19	36	256	220	240	430	274	247	425	290	182	165	121
20	37	248	200	200	450	338	240	365	256	166	147	1,500
21	116	338	285	250	430	274	238	352	234	152	123	395
22	247	260	500	240	600	260	235	305	221	145	114	289
23	100	239	390	250	1,850	252	224	272	229	139	115	238
24	68	209	330	230	803	238	230	254	294	136	104	212
25	59	188	285	225	605	229	215	246	236	157	94	178
26	55	191	260	245	509	258	204	234	234	149	91	158
27	51	186	250	220	485	268	197	212	194	156	195	152
28	49	179	240	210	420	350	222	248	176	146	253	147
29	52	173	220	230	------	345	217	422	332	137	143	137
30	330	167	200	250	------	298	194	4,130	695	406	115	129
31	3,210	------	310	235	------	272	------	1,380	------	271	105	------
TOTAL	5,039	12,538	6,563	13,500	21,486	11,506	9,578	16,865	10,267	7,986	5,346	6,296
MEAN	163	418	212	435	767	371	319	544	342	258	172	210
MAX	3,210	1,040	500	1,550	3,300	1,090	1,060	4,130	764	923	320	1,500
MIN	28	167	127	200	162	229	194	171	176	136	91	77
CFSM	.51	1.31	.66	1.36	2.40	1.16	1.00	1.70	1.07	.81	.54	.66
IN.	.59	1.46	.76	1.57	2.50	1.34	1.11	1.96	1.19	.93	.62	.73

CAL YR 1970 TOTAL 81,969 MEAN 225 MAX 3,210 MIN 28 CFSM .70 IN 9.53
WTR YR 1971 TOTAL 126,970 MEAN 348 MAX 4,130 MIN 28 CFSM 1.09 IN 14.76

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	1030	13.25	4,720	5-30	1300	15.52	6,510
2-13	UNKNOWN	13.18	4,670				

NOTE.--NO GAGE-HEIGHT RECORD DEC. 6 TO JAN. 12, JAN. 14 TO FEB. 23.

02062500 ROANOKE (STAUNTON) RIVER AT BROOKNEAL, VA.

LOCATION.--Lat 37°02'28", long 78°57'02", Campbell County, on left bank 1,600 ft upstream from bridge on U.S. Highway 501 at Brookneal, 2.9 miles upstream from Falling River, and at mile 255.9.

DRAINAGE AREA.--2,415 sq mi.

PERIOD OF RECORD.--April 1923 to current year.

GAGE.--Water-stage recorder. Datum of gage is 351.96 ft above mean sea level. Apr. 30, 1923, to Aug. 29, 1929, nonrecording gage, Aug. 30, 1929, to Aug. 15, 1940, water-stage recorder, and Aug. 16 to Oct. 1, 1940, nonrecording gage, at site 1,800 ft downstream at same datum. Oct. 2, 1940, to Sept. 30, 1941, nonrecording gage at site 1,600 ft downstream at same datum.

AVERAGE DISCHARGE.--48 years, 2,327 cfs (13.09 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 21,000 cfs May 31 (gage height, 22.41 ft); minimum daily, 199 cfs Oct. 5.

Period of record: Maximum discharge, 130,000 cfs Aug. 15, 1940 (gage height, 46.5 ft, at present site, from gage-height relation curve), from rating curve extended above 54,000 cfs on basis of slope-area measurement by Geological Survey, unit hydrograph and flood-routing studies by Corps of Engineers, and records for other stations in Roanoke River basin; minimum daily, 140 cfs July 25, 1966.

REMARKS.--Records good. Flow regulated since 1962 by Leesville Lake 40.1 miles upstream (see sta 02059400) and since 1963 by Smith Mountain Lake 58.1 miles upstream (see sta 02057400).

REVISIONS (WATER YEARS).--WSP 892: 1928(M). WSP 972: 1928-34. WSP 1303: 1924-27(M), 1929(M), 1941(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	995	9,020	1,230	602	1,280	1,050	1,580	1,560	7,860	3,570	771	1,250
2	1,030	4,570	1,240	557	4,390	1,850	3,400	1,130	6,910	3,850	771	1,250
3	1,060	6,210	1,220	635	4,320	4,120	827	1,170	6,240	2,560	2,370	1,250
4	252	4,240	1,330	635	2,350	10,700	750	1,620	10,700	1,310	1,650	1,180
5	199	7,860	1,330	2,560	654	8,440	778	1,620	5,580	785	1,210	419
6	918	6,060	484	6,100	876	3,460	1,930	1,620	2,010	680	2,620	370
7	995	1,670	448	5,900	1,590	1,310	3,560	3,110	1,030	3,540	813	360
8	1,020	897	1,150	7,270	4,640	1,600	4,200	2,340	4,320	1,640	715	1,240
9	1,170	757	1,210	4,390	5,360	4,220	6,150	2,030	1,890	3,420	635	1,170
10	988	1,370	1,150	939	3,200	2,330	1,650	1,820	925	3,900	2,920	2,260
11	244	2,280	1,370	855	3,310	4,470	1,140	2,120	3,690	1,290	3,690	3,190
12	244	3,100	1,890	1,840	3,340	911	1,150	1,730	3,840	897	813	946
13	1,150	2,830	538	1,580	4,270	848	1,670	15,000	764	1,600	883	1,380
14	1,730	2,110	538	1,700	16,400	827	1,640	11,400	750	2,830	2,850	925
15	1,720	1,840	1,170	3,100	4,120	1,400	1,540	7,350	1,600	1,440	538	1,370
16	1,530	2,080	1,170	1,070	6,130	4,810	1,410	17,000	2,520	1,890	442	1,280
17	1,480	5,140	1,910	736	2,890	2,550	1,300	15,300	5,680	3,120	414	1,910
18	345	2,430	2,070	701	3,930	4,890	1,050	6,000	4,580	628	1,630	2,950
19	233	925	757	1,750	1,660	1,610	1,570	6,360	3,820	563	1,760	484
20	375	1,020	635	2,490	1,480	6,070	2,660	3,880	883	1,440	2,170	3,110
21	1,080	1,170	841	1,780	995	1,650	1,480	2,410	1,570	1,330	1,760	2,630
22	1,480	813	5,470	4,960	1,420	1,660	1,170	2,400	1,840	1,290	502	1,660
23	1,810	1,560	1,720	3,390	12,300	4,770	1,150	2,120	750	1,290	448	1,470
24	1,370	6,430	3,680	743	9,730	3,940	1,160	2,210	1,370	1,300	1,210	1,410
25	325	3,070	869	687	8,020	1,610	1,160	2,160	4,150	557	1,220	1,660
26	307	1,290	722	2,240	5,760	1,300	1,950	1,640	3,270	589	1,220	544
27	1,060	648	661	9,980	5,080	778	2,200	1,570	743	1,280	1,430	496
28	1,070	1,130	622	9,990	1,200	883	1,160	1,630	757	1,320	2,010	1,210
29	1,100	641	1,640	6,670	------	1,110	1,170	2,780	4,050	1,280	715	1,240
30	3,310	583	1,500	2,770	------	1,620	1,250	13,600	4,680	1,410	496	1,290
31	7,040	------	2,400	722	------	1,570	------	17,000	------	1,840	1,240	------
TOTAL	37,630	83,744	42,965	89,342	114,715	88,357	53,805	153,680	98,772	54,439	41,916	41,904
MEAN	1,214	2,791	1,386	2,882	4,097	2,850	1,794	4,957	3,292	1,756	1,352	1,397
MAX	7,040	9,020	5,470	9,990	12,300	10,700	6,150	17,000	10,700	3,900	3,690	3,190
MIN	199	583	448	557	654	778	750	1,130	743	557	414	360
(*)	+227	+10	-46	-779	+860	-351	+618	+13	-611	+13	+54	+48
MEAN‡	1,441	2,801	1,340	2,103	4,957	2,499	2,412	4,970	2,681	1,769	1,406	1,445
CFSM‡	.60	1.16	.55	.87	2.05	1.03	1.00	2.06	1.11	.73	.58	.60
IN.‡	.69	1.29	.63	1.00	2.14	1.19	1.12	2.38	1.24	.84	.67	.67

CAL YR 1970 TOTAL 601,803 MEAN 1,649 MAX 12,000 MIN 185 MEAN‡ 1,628 CFSM‡ .67 IN.‡ 9.15
WTR YR 1971 TOTAL 901,269 MEAN 2,469 MAX 17,000 MIN 199 MEAN‡ 2,446 CFSM‡ 1.01 IN.‡ 13.75

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN SMITH MOUNTAIN AND LEESVILLE LAKES; FURNISHED BY APPALACHIAN POWER CO.

‡ ADJUSTED FOR CHANGE IN CONTENTS.

02064000 FALLING RIVER NEAR NARUNA, VA.

LOCATION.--Lat 37°07'36", long 78°57'36", Campbell County, on left bank at upstream side of bridge on State Highway 643, 2.7 miles northeast of Naruna, and 3.2 miles upstream from Little Falling River.

DRAINAGE AREA.--173 sq mi.

PERIOD OF RECORD.--July 1929 to January 1935, September 1941 to current year.

GAGE.--Water-stage recorder. Datum of gage is 412.32 ft above mean sea level. Prior to Jan. 15, 1935, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--35 years (1929-34, 1941-71), 135 cfs (10.60 inches per year).

EXTREMES.--Current year: Maximum discharge, 8,730 cfs May 13 (gage height, 18.83 ft), from rating curve extended as explained below; minimum, 14 cfs Oct. 1, 4-8, 13-15; minimum gage height, 2.45 ft Oct. 6, 7, 13-15.

Period of record: Maximum discharge, 15,800 cfs Sept. 18 or 19, 1944 (gage height, 23.9 ft, from floodmarks), from rating curve extended above 6,100 cfs on basis of slope-area measurements at gage heights 23.9 and 26.5 ft; minimum, 3.0 cfs Oct. 9, 1932 (gage height, 2.18 ft).

Flood in August 1940 reached a stage of 26.5 ft, from floodmarks (discharge, 22,000 cfs, by slope-area measurement).

REMARKS.--Records good. Small diurnal fluctuation at times during low flow; cause unknown. Prior to 1958, diurnal fluctuation caused by gristmill at Spring Mills. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1333: 1930, 1931-34(M), 1935. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	150	49	66	66	136	108	77	308	81	76	62
2	17	88	48	86	56	145	103	76	209	136	98	63
3	17	73	47	68	68	313	112	78	175	85	74	61
4	16	182	46	75	73	715	97	77	151	70	119	59
5	14	404	41	850	57	287	92	73	143	65	249	59
6	14	133	43	562	156	211	195	75	175	65	105	58
7	14	84	42	247	434	178	750	102	123	76	80	56
8	14	129	40	170	1,080	148	407	245	114	75	67	55
9	15	62	43	140	627	130	225	147	131	65	61	55
10	16	57	44	124	258	122	176	104	105	217	57	53
11	16	495	44	112	188	121	149	90	96	90	103	215
12	16	262	48	103	168	111	136	90	96	78	101	1,140
13	15	191	60	98	667	108	125	6,400	121	67	63	825
14	14	128	49	103	577	103	116	1,290	97	85	55	276
15	16	530	45	105	245	120	106	489	90	76	51	146
16	21	204	58	94	184	136	103	3,220	169	62	49	115
17	20	126	141	86	152	106	100	669	167	60	49	94
18	17	97	85	83	136	95	98	322	119	55	142	79
19	18	83	68	76	122	121	94	225	106	56	104	78
20	19	80	62	76	126	179	91	188	99	63	69	76
21	56	87	95	95	122	124	91	213	93	53	60	76
22	129	70	205	74	179	111	90	179	87	50	73	75
23	42	65	133	91	1,680	104	85	135	166	49	90	73
24	28	58	115	85	382	94	90	122	153	49	57	72
25	24	53	92	89	230	90	83	128	95	74	51	67
26	23	53	81	85	182	107	80	117	83	62	50	65
27	22	53	72	71	188	119	78	105	77	60	134	65
28	22	52	70	62	156	175	90	128	73	53	234	65
29	23	51	80	77	------	187	87	352	70	55	93	63
30	173	50	64	80	------	142	79	2,630	83	104	72	61
31	635	------	62	81	------	119	------	639	------	87	64	------
TOTAL	1,502	4,150	2,172	4,214	8,599	4,957	4,236	18,777	3,774	2,323	2,750	4,307
MEAN	48.5	138	70.1	136	307	160	141	606	126	74.9	88.7	144
MAX	635	530	205	850	1,680	715	750	6,400	308	217	249	1,140
MIN	14	50	40	62	56	90	78	73	70	49	49	53
CFSM	.28	.80	.41	.79	1.77	.92	.82	3.50	.73	.43	.51	.83
IN.	.32	.89	.47	.91	1.85	1.07	.91	4.04	.81	.50	.59	.93

CAL YR 1970 TOTAL 26,233 MEAN 71.9 MAX 656 MIN 13 CFSM .42 IN 5.64
WTR YR 1971 TOTAL 61,761 MEAN 169 MAX 6,400 MIN 14 CFSM .98 IN 13.28

PEAK DISCHARGE (BASE, 2,300 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-23	0630	10.91	3,110	5-16	0830	13.90	4,660
5-13	1430	18.83	8,730	5-30	1400	12.87	4,040

02065200 ROANOKE (STAUNTON) RIVER AT CLARKTON, VA.

LOCATION.--Lat 36°58'38", long 78°53'50", Halifax County, on right bank 100 ft downstream from bridge on State Highway 620, 1,300 ft upstream from Catawba Creek, 0.8 mile southeast of Clarkton, 1.0 mile downstream from Childrey Creek, 3.8 miles northeast of Nathalie, and at mile 249.2.

DRAINAGE AREA.--2,691 sq mi.

PERIOD OF RECORD.--June 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 340.00 ft above mean sea level.

AVERAGE DISCHARGE.--8 years, 1,819 cfs (9.18 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 24,600 cfs May 16 (gage height, 24.85 ft); minimum, 212 cfs Oct. 5 (gage height, 3.27 ft).
Period of record: Maximum discharge, 24,700 cfs Aug. 25, 1967 (gage height, 24.87 ft); minimum, 172 cfs Sept. 23, 1968 (gage height, 3.15 ft).

REMARKS.--Records good. Flow regulated by Leesville Lake 46.8 miles upstream (see sta 02059400) and, beginning September 1963, by Smith Mountain Lake 64.8 miles upstream (see sta 02057400). Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	CEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,020	9,670	1,390	718	920	1,300	1,780	1,790	9,350	3,670	855	1,400
2	1,060	4,710	1,420	650	4,640	2,100	3,550	1,190	7,300	3,800	880	1,390
3	1,100	6,400	1,390	718	4,910	3,750	1,070	1,180	6,060	2,550	2,390	1,390
4	342	4,610	1,520	718	2,760	11,900	895	1,720	10,800	1,620	1,820	',300
5	230	7,640	1,510	2,850	940	9,480	808	1,730	6,680	905	1,720	550
6	855	6,920	598	6,790	1,110	4,730	2,060	1,730	2,480	767	2,730	464
7	1,010	2,170	546	6,310	2,000	1,710	4,320	3,090	1,220	3,360	960	450
8	1,040	1,110	1,260	7,530	6,270	1,510	4,660	2,660	4,260	1,820	812	1,280
9	1,180	920	1,360	5,570	6,800	4,590	6,960	2,360	2,070	3,300	691	1,280
10	1,010	1,540	1,300	1,200	3,960	2,150	2,140	1,990	1,110	3,950	2,860	2,240
11	324	2,590	1,480	1,050	3,690	5,310	1,420	2,190	3,530	1,550	3,620	3,460
12	250	3,650	2,170	2,060	3,620	1,150	1,220	1,960	3,980	1,040	1,020	4,080
13	1,060	3,290	691	1,810	4,590	1,030	1,920	16,700	940	1,760	1,060	3,350
14	1,810	2,500	630	1,930	12,200	990	1,870	15,600	870	2,850	2,820	1,780
15	1,760	2,590	1,300	3,280	4,300	1,020	1,800	7,940	1,670	1,610	677	1,780
16	1,570	2,220	1,330	1,230	6,930	5,480	1,660	19,600	2,220	1,940	502	1,580
17	1,540	5,280	2,140	895	3,190	2,080	1,400	19,300	5,370	1,090	471	1,900
18	474	3,180	2,360	794	4,480	5,700	1,180	7,210	5,230	736	2,030	3,290
19	276	1,090	950	1,780	2,140	1,190	1,190	6,400	4,010	618	2,170	700
20	372	1,140	758	2,360	1,880	6,590	3,210	4,430	1,030	1,559	2,310	2,440
21	1,070	1,330	772	2,220	1,250	2,240	1,640	2,690	1,700	1,450	1,900	3,300
22	1,640	970	5,800	4,660	1,240	1,220	1,250	2,700	1,930	1,390	506	1,910
23	1,940	1,050	2,080	4,140	13,200	5,410	1,220	2,340	870	1,390	578	1,690
24	1,480	6,350	3,940	910	11,000	3,670	1,230	2,250	1,550	1,390	1,300	1,610
25	404	3,990	1,060	812	8,610	2,150	1,230	2,550	4,250	638	1,330	1,820
26	348	1,550	850	1,660	6,310	1,520	1,500	1,860	3,270	626	1,310	686
27	1,050	754	758	9,870	5,920	920	2,850	1,740	910	1,360	2,380	598
28	1,100	1,250	695	10,300	1,570	1,080	1,240	1,770	727	1,410	3,060	1,330
29	1,130	785	1,760	7,110	------	1,230	1,270	2,880	4,000	1,360	1,100	1,380
30	3,240	655	1,580	3,970	------	1,900	1,210	15,600	4,260	1,570	686	1,440
31	6,530	------	2,540	990	------	1,750	------	20,700	------	1,980	1,380	------
TOTAL	38,215	91,904	47,938	96,885	130,430	96,850	59,753	177,850	103,647	57,050	48,028	51,868
MEAN	1,233	3,063	1,546	3,125	4,658	3,124	1,992	5,737	3,455	1,840	1,549	1,729
MAX	6,530	9,670	5,800	10,300	13,200	11,900	6,960	20,700	10,800	3,950	3,620	4,080
MIN	230	655	546	650	920	920	808	1,180	727	618	471	450
(*)	+227	+10	-46	-779	+860	-351	+618	+13	-611	+13	+54	+48
MEAN‡	1,460	3,073	1,500	2,346	5,518	2,773	2,610	5,750	2,844	1,853	1,603	1,777
CFSM‡	.54	1.14	.56	.87	2.05	1.03	.97	2.14	1.06	.69	.60	.66
IN.‡	.62	1.27	.65	1.00	2.14	1.19	1.08	2.47	1.18	.80	.69	.74

CAL YR 1970 TOTAL 636,073 MEAN 1,743 MAX 11,800 MIN 185 MEAN‡ 1,722 CFSM‡ .64 IN.‡ 8.69
WTR YR 1971 TOTAL 1,000,418 MEAN 2,741 MAX 20,700 MIN 230 MEAN‡ 2,716 CFSM‡ 1.01 IN.‡ 13.71

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN SMITH MOUNTAIN AND LEESVILLE LAKES; FURNISHED BY APPALACHIAN POWER CO.

‡ ADJUSTED FOR CHANGE IN CONTENTS.

02065500 CUB CREEK AT PHENIX, VA.

LOCATION.--Lat 37°04'45", long 78°45'50", Charlotte County, on right bank 10 ft upstream from bridge on State Highway 40, 0.9 mile west of Phenix, 1.9 miles downstream from Rough Creek, and 6.4 miles upstream from Louse Creek.

DRAINAGE AREA.--98.0 sq mi.

PERIOD OF RECORD.--August 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 370.19 ft above mean sea level. Prior to July 14, 1950, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--25 years, 84.6 cfs (11.72 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,960 cfs May 14 (gage height, 10.33 ft); minimum, 2.6 cfs Oct. 6 (gage height, 0.74 ft).

Period of record: Maximum discharge, 2,720 cfs Dec. 4, 1948 (gage height, 13.0 ft, from graph based on gage readings); minimum, 2.6 cfs Oct. 6, 1970 (gage height, 0.74 ft).

Flood in August 1940 reached a stage of 17.5 ft, from floodmark.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1333: 1947(M), 1948, 1949(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	170	33	36	46	73	69	41	356	67	47	56
2	4.2	140	34	37	42	71	67	40	136	60	65	53
3	4.2	120	33	41	40	127	81	41	107	51	49	48
4	3.9	100	32	53	38	272	71	42	98	45	47	45
5	3.3	75	31	171	50	279	64	38	77	41	171	43
6	2.8	56	30	412	80	122	107	39	70	41	139	49
7	2.8	38	30	254	170	99	316	48	63	43	62	44
8	3.0	33	29	86	382	84	431	135	57	41	45	40
9	3.3	30	31	68	850	74	189	95	56	37	39	37
10	3.3	27	32	61	630	71	103	62	52	49	35	36
11	3.6	80	32	56	375	72	82	51	49	44	34	45
12	3.9	120	32	51	225	67	74	49	49	39	57	376
13	3.9	71	36	46	156	64	69	261	65	37	39	908
14	4.0	55	36	48	352	62	64	1,400	56	33	32	279
15	4.3	163	32	49	339	64	58	374	49	32	30	93
16	5.2	163	34	46	140	98	56	747	115	31	29	73
17	6.0	74	68	43	92	74	55	1,200	114	36	28	64
18	5.4	56	63	44	84	64	54	307	74	30	211	58
19	5.4	50	48	41	75	70	51	129	62	29	232	57
20	6.0	47	44	41	74	124	49	98	56	31	69	56
21	11	51	48	39	72	89	48	92	50	29	48	54
22	20	46	89	41	73	75	48	80	48	27	42	57
23	30	43	79	47	182	70	46	70	48	29	56	57
24	40	38	64	49	198	64	48	64	268	32	41	55
25	30	36	60	51	103	59	45	63	233	30	34	49
26	24	36	52	51	87	64	43	61	67	31	32	46
27	22	36	47	49	89	74	41	55	51	30	234	46
28	28	35	44	47	83	96	47	63	46	30	1,000	45
29	25	35	42	45	------	118	47	215	46	34	373	45
30	35	34	40	47	------	92	41	945	110	73	87	43
31	85	------	38	50	------	76	------	1,180	------	54	65	------
TOTAL	433.3	2,058	1,343	2,200	5,057	2,908	2,564	8,085	2,718	1,216	3,472	2,957
MEAN	14.0	68.6	43.3	71.0	182	93.8	85.5	261	90.6	39.2	112	98.6
MAX	85	170	89	412	850	279	431	1,400	356	73	1,000	908
MIN	2.8	27	29	36	38	59	41	38	46	27	28	36
CFSM	.14	.70	.44	.72	1.86	.96	.87	2.66	.92	.40	1.14	1.01
IN.	.16	.78	.51	.84	1.93	1.10	.97	3.07	1.03	.46	1.32	1.12

CAL YR 1970 TOTAL 14,587.4 MEAN 40.0 MAX 208 MIN 2.8 CFSM .41 IN 5.54
WTR YR 1971 TOTAL 35,051.3 MEAN 96.0 MAX 1,400 MIN 2.8 CFSM .98 IN 13.31

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-14	0500	10.33	1,960	8-28	0200	8.48	1,420
5-17	0100	10.04	1,870	9-13	0730	7.74	1,180
5-31	0100	9.53	1,720				

02066000 ROANOKE (STAUNTON) RIVER AT RANDOLPH, VA.

LOCATION.--Lat 36°54'54", long 78°44'28", Halifax County, on right bank 14 ft downstream from bridge on State Highway 746, 2.8 miles northwest of Randolph, 3.6 miles upstream from Roanoke Creek, and at mile 227.3.

DRAINAGE AREA.--2,977 sq mi.

PERIOD OF RECORD.--August 1900 to September 1906, October 1927 to September 1930, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1303. Prior to October 1902, published as Staunton River at Randolph. Gage heights collected since 1905 at this site or at former site are contained in reports of the National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 307.59 ft above mean sea level. Aug. 27, 1900, to Oct. 13, 1902, nonrecording gage at site 3.2 miles downstream at datum about 5.9 ft lower; Oct. 14, 1902, to Aug. 11, 1906, and Oct. 1, 1927, to Mar. 31, 1930, nonrecording gage at site of original gage at datum 3.93 ft lower than present datum.

AVERAGE DISCHARGE.--30 years, 2,989 cfs (13.63 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 25,300 cfs May 31 (gage height, 23.91 ft); minimum daily, 286 cfs Oct. 5.

Period of record: Maximum discharge, 97,000 cfs Dec. 31, 1901 (gage height, 35.0 ft, from graph based on gage readings, site and datum then in use); minimum daily, 179 cfs Sept. 8, 1965, July 7, 1970.

Flood of Aug. 16, 1940, reached a stage of 41.6 ft, present site and datum (discharge, 150,000 cfs), from information by Corps of Engineers.

REMARKS.--Records good. Flow regulated since 1962 by Leesville Lake 68.7 miles upstream (see sta 02059400) and since 1963 by Smith Mountain Lake 86.7 miles upstream (see sta 02057400). Water-quality records for the current year are included in this report.

REVISIONS (WATER YEARS).--WSP 1203: 1928-30. WSP 1303: 1901-6. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,110	10,100	1,200	1,520	972	1,650	2,060	1,970	20,300	4,550	1,380	1,710
2	1,130	6,910	1,490	782	4,020	2,040	3,250	1,470	9,580	3,940	1,100	1,670
3	1,210	6,430	1,470	792	5,250	3,330	2,210	1,410	6,500	2,780	2,290	1,650
4	877	5,190	1,530	858	2,950	10,400	1,230	1,880	8,720	2,130	1,990	1,570
5	286	6,750	1,580	2,040	1,730	11,400	1,090	1,960	9,370	1,220	1,890	1,210
6	396	8,680	965	7,170	1,150	6,880	1,980	1,960	3,340	910	2,950	678
7	1,120	3,350	560	7,680	1,930	2,550	4,700	3,000	1,590	2,570	1,670	633
8	1,240	1,470	1,010	7,700	6,860	1,840	6,090	3,100	3,670	2,580	1,090	942
9	1,250	1,160	1,340	7,090	9,280	4,340	7,600	3,070	2,780	3,220	886	1,550
10	1,180	1,520	1,370	2,100	6,390	3,020	3,530	2,460	1,580	3,930	2,390	2,310
11	812	2,240	1,460	1,330	4,330	5,290	1,920	2,500	3,230	2,170	3,690	3,600
12	309	4,300	1,980	1,820	3,970	2,080	1,620	2,320	4,200	1,310	1,760	8,230
13	519	3,840	1,330	2,130	4,290	1,290	2,180	8,600	1,630	1,660	1,230	7,170
14	1,910	3,030	638	2,140	11,100	1,220	2,200	20,800	1,040	2,760	2,370	3,890
15	1,960	3,180	1,110	3,360	7,540	1,190	2,120	12,700	1,490	1,960	1,590	2,300
16	1,620	3,180	1,360	1,790	7,350	5,080	1,950	15,100	2,150	1,840	630	1,960
17	1,840	5,290	1,790	1,320	4,200	2,430	1,580	24,400	5,010	3,140	561	2,170
18	1,180	4,380	2,630	965	4,770	5,940	1,510	17,700	6,050	1,490	1,280	3,530
19	320	1,550	1,660	1,490	2,920	2,180	1,390	7,190	4,320	740	3,360	1,570
20	291	1,150	912	2,370	2,100	5,870	3,390	6,460	1,660	1,230	2,860	904
21	698	1,410	820	2,740	1,540	3,650	2,000	3,320	1,610	1,580	2,320	4,870
22	1,750	1,490	5,000	4,140	1,420	1,430	1,560	3,160	1,990	1,490	1,310	2,320
23	2,220	1,010	3,130	4,840	8,570	5,150	1,470	2,830	1,380	1,480	808	2,100
24	1,810	5,310	4,220	1,710	13,000	4,150	1,450	2,590	1,400	1,490	1,190	1,910
25	908	5,260	1,980	1,040	9,190	3,070	1,480	2,940	4,340	1,120	1,580	1,940
26	390	1,970	1,110	1,360	7,780	1,770	1,440	2,280	3,500	715	1,550	1,250
27	669	1,150	939	6,560	6,530	1,290	3,310	2,050	1,730	1,100	3,440	733
28	1,210	846	844	9,900	2,560	1,290	1,590	2,030	904	1,540	6,740	1,100
29	1,260	1,300	1,230	8,870	------	1,510	1,510	3,580	3,560	1,490	3,020	1,520
30	2,840	708	1,880	5,490	------	2,200	1,480	12,600	3,970	1,820	1,540	1,540
31	4,290	------	2,740	1,450	------	2,090	------	23,500	------	2,180	1,320	------
TOTAL	38,505	103,554	51,278	104,547	143,732	107,620	70,890	200,930	122,594	62,135	61,673	68,530
MEAN	1,242	3,452	1,654	3,372	5,133	3,472	2,363	6,482	4,086	2,004	1,989	2,284
MAX	4,290	10,100	5,000	9,900	13,000	11,400	7,600	24,400	20,300	4,550	6,740	8,230
MIN	286	708	560	782	972	1,190	1,090	1,410	904	715	561	633
(*)	+227	+10	-46	-779	+860	-351	+618	+13	-611	+13	+54	+48
MEAN‡	1,469	3,462	1,608	2,593	5,993	3,121	2,981	6,495	3,475	2,017	2,043	2,332
CFSM‡	.49	1.16	.54	.87	2.01	1.05	1.00	2.18	1.17	.68	.69	.78
IN.‡	.56	1.29	.62	1.00	2.09	1.21	1.12	2.51	1.30	.78	.80	.87

CAL YR 1970 TOTAL 719,557 MEAN 1,971 MAX 12,000 MIN 179 MEAN‡ 1,950 CFSM‡ .66 IN.‡ 8.90
WTR YR 1971 TOTAL 1,135,988 MEAN 3,112 MAX 24,400 MIN 286 MEAN‡ 3,089 CFSM‡ 1.04 IN.‡ 14.09

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN SMITH MOUNTAIN AND LEESVILLE LAKES; FURNISHED BY APPALACHIAN POWER CO.

‡ ADJUSTED FOR CHANGE IN CONTENTS.

02066500 ROANOKE CREEK AT SAXE, VA.

LOCATION.--Lat 36°55'49", long 78°39'56", Charlotte County, on right bank at downstream side of bridge on State Highway 612, 500 ft northwest of Saxe, and 5.2 miles upstream from mouth.

DRAINAGE AREA.--135 sq mi.

PERIOD OF RECORD.--August 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 322.36 ft above mean sea level. Prior to July 21, 1950, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--25 years, 104 cfs (10.46 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,530 cfs May 31 (gage height, 11.08 ft); minimum daily, 0.27 cfs Oct. 6.

Period of record: Maximum discharge, 4,710 cfs Aug. 18, 1955 (gage height, 13.58 ft); no flow for part of Sept. 18, 1954, from information by local observer.

Flood of Aug. 16, 1940, reached a stage of 25.7 ft (backwater from Roanoke River), from floodmark.

REMARKS.--Records good except those below 10 cfs, which are fair. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1333: 1949. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.82	63	29	38	47	77	77	36	1,240	80	86	63
2	.55	55	28	43	35	69	68	33	572	50	64	45
3	.40	42	27	48	30	187	81	33	279	39	52	37
4	.32	35	26	53	37	407	92	36	122	35	45	31
5	.29	33	25	345	58	493	79	39	84	32	39	28
6	.27	31	25	533	146	343	161	37	65	29	39	26
7	.28	30	24	525	257	176	356	43	54	31	41	26
8	.29	26	23	293	880	110	494	80	47	31	38	28
9	.31	23	22	142	1,450	87	414	115	43	30	31	47
10	.34	23	23	102	1,220	74	230	100	39	31	26	29
11	.37	42	24	90	504	70	117	71	35	29	23	27
12	.42	85	26	81	257	66	87	54	37	29	20	446
13	.50	87	26	72	252	62	76	196	41	28	18	1,400
14	.60	60	27	67	355	58	66	330	39	25	14	1,070
15	.70	179	27	66	434	56	59	468	38	21	11	512
16	.80	228	33	63	289	61	53	795	46	19	9.2	242
17	.90	228	61	58	155	66	49	1,320	82	17	9.2	96
18	.86	102	91	68	104	58	47	875	98	14	18	56
19	.84	63	78	53	86	58	45	410	67	13	28	45
20	.95	50	58	45	76	80	43	177	50	12	56	39
21	3.5	45	73	41	71	107	41	89	41	11	42	35
22	5.8	42	136	40	81	87	41	69	35	10	32	35
23	6.2	39	149	45	136	7C	41	58	33	8.7	27	39
24	11	34	113	53	170	60	41	50	39	8.5	22	45
25	9.3	31	82	59	130	54	39	45	121	9.2	19	41
26	7.6	30	63	63	91	56	37	42	88	9.0	17	36
27	7.1	29	52	54	86	64	34	38	48	9.4	157	32
28	8.5	29	48	45	83	87	36	48	37	10	389	30
29	8.1	29	44	40	------	122	39	430	32	14	668	29
30	15	29	40	43	------	128	39	1,570	40	29	430	29
31	34	------	35	49	------	99	------	2,210	------	98	158	------
TOTAL	126.89	1,822	1,538	3,317	7,560	3,592	3,082	9,897	3,592	811.8	2,628.4	4,644
MEAN	4.09	60.7	49.6	107	270	116	103	319	120	26.2	84.8	155
MAX	34	228	149	533	1,450	493	494	2,210	1,240	98	668	1,400
MIN	.27	23	22	38	30	54	34	33	32	8.5	9.2	26
CFSM	.03	.45	.37	.79	2.00	.86	.76	2.36	.89	.19	.63	1.15
IN.	.03	.50	.42	.91	2.08	.99	.85	2.73	.99	.22	.72	1.28

CAL YR 1970 TOTAL 19,805.86 MEAN 54.3 MAX 588 MIN .27 CFSM .40 IN 5.46
WTR YR 1971 TOTAL 42,611.09 MEAN 117 MAX 2,210 MIN 27 CFSM .87 IN 11.74

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 9	1500	9.82	1,610	5-31	0430	11.08	2,530
5-17	1130	9.68	1,520	9-13	1430	9.87	1,650

02068500 DAN RIVER NEAR FRANCISCO, N. C.

LOCATION.--Lat 36°30'53", long 80°18'11", Stokes County, on left bank 200 ft upstream from bridge on State Highway 704, 700 ft downstream from Georges Mill, 0.2 mile downstream from Elk Creek, 3 miles east of Francisco, and 7.9 miles downstream from Little Dan River.

DRAINAGE AREA.--124 sq mi.

PERIOD OF RECORD.--August 1924 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Altitude of gage is 830 ft (from topographic map). Prior to Nov. 15, 1929, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--47 years, 183 cfs (20.04 inches per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 2,550 cfs Feb. 22 (gage height, 5.10 ft); minimum, 47 cfs Oct. 7 (gage height, 1.07 ft); minimum daily, 53 cfs Oct. 18.

Period of record: Maximum discharge, 12,400 cfs Oct. 19, 1937 (gage height, 12.45 ft); minimum, 7.1 cfs Sept. 8, 1932 (gage height, 0.43 ft); minimum daily, 28 cfs Aug. 17, 18, 1963, Sept. 12, 1966.

Flood in 1916 reached a stage of about 15 ft (discharge, 16,000 cfs), from information by local residents.

REMARKS.--Records good. Considerable diurnal fluctuation and regulation from mills and powerplants above station. Talbott Reservoir (see sta 02067800) and Townes Reservoir (see sta 02067820) above Pinnacles Hydroelectric Plant in Virginia, 28 miles above station, were completed in 1938. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 892: Drainage area. WSP 1303: 1938-50 (monthly runoff). WSP 1433: 1925-26, 1928-29, 1931, 1942, 1948.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	415	113	149	145	239	167	163	231	180	189	122
2	74	342	106	167	196	236	213	142	242	151	181	114
3	71	326	89	146	176	342	205	135	237	112	188	118
4	66	266	96	166	153	367	174	203	217	118	176	80
5	64	256	103	410	180	307	168	183	185	98	177	68
6	64	191	127	280	210	270	247	183	201	85	102	66
7	60	178	116	203	247	225	293	213	170	98	99	132
8	86	168	141	164	356	210	221	230	200	166	98	133
9	124	165	148	170	346	217	165	188	153	161	91	109
10	94	183	147	146	235	196	165	134	157	204	151	103
11	82	200	105	141	213	208	137	195	139	110	167	85
12	68	194	110	151	170	181	133	252	219	98	179	87
13	91	183	99	155	445	190	133	825	188	82	89	107
14	82	183	83	180	466	188	173	420	187	78	88	71
15	89	183	114	182	334	193	188	347	198	110	85	65
16	84	178	147	164	259	213	194	593	180	75	78	90
17	122	155	169	155	222	195	176	366	154	87	79	93
18	53	126	137	126	191	189	152	280	140	97	84	140
19	65	126	116	159	165	226	128	284	126	110	103	106
20	69	135	118	161	173	209	183	266	137	123	119	177
21	133	150	180	167	189	201	209	234	142	93	135	285
22	137	145	241	121	692	162	222	192	230	92	103	257
23	122	122	219	132	729	173	201	169	168	93	114	222
24	91	150	202	142	442	192	196	171	184	99	116	170
25	78	153	165	151	400	175	137	197	202	150	93	92
26	72	140	120	134	361	181	129	190	194	173	96	92
27	91	108	161	123	266	184	174	154	158	160	123	132
28	118	124	116	171	242	175	250	204	142	141	85	144
29	97	140	144	176	------	167	194	278	189	209	78	79
30	486	109	164	132	------	160	130	366	156	464	68	87
31	881	------	160	118	------	170	------	309	------	226	72	------
TOTAL	3,878	5,494	4,256	5,142	8,203	6,541	5,457	8,066	5,426	4,243	3,606	3,626
MEAN	125	183	137	166	293	211	182	260	181	137	116	121
MAX	881	415	241	410	729	367	293	825	242	464	189	285
MIN	53	108	83	118	145	160	128	134	126	75	68	65
(*)	+20	-18	-1	-3	+14	-7	-1	+5	-5	+1	-2	+4

CAL YR 1970 TOTAL 61,797 MEAN 169 MAX 2,500 MIN 53 MEAN‡ 169 CFSM‡ 1.36 IN.‡ 18.51
WTR YR 1971 TOTAL 63,938 MEAN 175 MAX 881 MIN 53 MEAN‡ 175 CFSM‡ 1.41 IN.‡ 19.17

PEAK DISCHARGE (BASE, 2,000 CFS).--FEB. 22 (1830) 2,550 CFS (5.10 FT).

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN TALBOTT AND TOWNES RESERVOIRS; FURNISHED BY CITY OF DANVILLE, VA.

‡ ADJUSTED FOR CHANGE IN CONTENTS.

02069700 SOUTH MAYO RIVER NEAR NETTLERIDGE, VA.

LOCATION.--Lat 36°34'15", long 80°07'47", Patrick County, on right bank at downstream side of bridge on State Highway 700, 1.2 miles southeast of Nettleridge, 1.4 miles downstream from Russell Creek, and 3.6 miles upstream from Spoon Creek.

DRAINAGE AREA.--84.6 sq mi.

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 871.60 ft above mean sea level. Prior to Oct. 9, 1964, nonrecording gage and crest-stage gage at same site and datum.

AVERAGE DISCHARGE.--9 years, 106 cfs (17.02 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,290 cfs Oct. 31 (gage height, 10.91 ft); minimum daily, 52 cfs Oct. 4-8, 14.

Period of record: Maximum discharge, 3,290 cfs Oct. 31, 1970 (gage height, 10.91 ft); minimum, 21 cfs Aug. 27, 1963; minimum gage height, 2.75 ft July 28, 1966.

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	400	85	91	86	163	120	114	143	99	101	60
2	56	240	85	90	88	170	127	112	133	101	118	60
3	55	227	85	91	92	290	127	110	125	98	112	61
4	52	184	84	103	161	284	118	106	123	87	94	61
5	52	163	82	407	161	205	116	104	115	84	101	60
6	52	144	82	202	187	187	252	110	146	84	91	58
7	52	129	80	144	252	174	301	133	114	83	85	58
8	52	118	80	122	354	163	214	131	114	80	79	59
9	53	112	82	110	260	154	185	112	114	93	78	57
10	54	131	82	105	174	151	166	104	123	101	73	55
11	53	161	82	99	149	151	156	101	108	137	82	73
12	53	151	84	92	140	142	149	156	123	117	102	85
13	53	140	84	90	463	140	145	851	121	91	75	80
14	52	122	79	90	344	135	141	343	108	84	70	65
15	63	133	79	88	238	163	139	245	104	80	67	60
16	58	116	98	85	155	149	137	468	114	78	65	59
17	53	108	122	84	172	135	135	271	117	74	66	66
18	54	105	94	86	158	129	131	212	106	73	104	89
19	54	101	88	82	149	151	125	182	101	112	82	89
20	55	116	84	79	151	154	125	164	96	91	71	113
21	155	116	182	76	142	140	125	154	98	79	67	192
22	90	103	189	78	408	133	131	141	108	78	85	186
23	67	99	156	99	686	129	125	135	99	74	101	108
24	63	92	144	94	290	127	131	132	94	72	73	98
25	61	92	122	107	232	122	117	131	90	101	68	79
26	61	91	112	99	205	135	112	127	88	96	66	75
27	61	90	105	92	189	135	112	117	85	91	85	73
28	60	90	99	95	170	149	178	186	84	90	71	71
29	62	86	94	103	------	144	129	236	99	93	63	73
30	713	86	94	91	------	131	119	243	153	188	62	68
31	1,680	------	92	90	------	125	------	173	------	119	61	------
TOTAL	4,156	4,046	3,110	3,364	6,236	4,860	4,388	5,503	3,346	2,928	2,518	2,337
MEAN	134	135	100	109	223	157	146	190	112	94.5	81.2	77.9
MAX	1,680	400	189	407	686	290	301	851	153	188	118	186
MIN	52	86	79	76	86	122	112	101	84	72	61	55
CFSM	1.58	1.60	1.18	1.29	2.64	1.86	1.73	2.25	1.32	1.12	.96	.92
IN.	1.83	1.78	1.37	1.48	2.74	2.14	1.93	2.60	1.47	1.29	1.11	1.03

CAL YR 1970 TOTAL 41,454 MEAN 114 MAX 2,350 MIN 49 CFSM 1.35 IN 18.23
WTR YR 1971 TOTAL 47,192 MEAN 129 MAX 1,680 MIN 52 CFSM 1.52 IN 20.75

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	0200	10.91	3,290	5-13	0700	7.09	1,300
2-22	2400	7.34	1,390				

02070000 NORTH MAYO RIVER NEAR SPENCER, VA.

LOCATION.--Lat 36°34'05", long 79°59'15", Henry County, on left bank 800 ft downstream from bridge on State Highway 629 at Moores Mill, 2.1 miles downstream from Horse Pasture Creek, and 3.8 miles (corrected) southeast of Spencer.

DRAINAGE AREA.--108 sq mi.

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Datum of gage is 730.94 ft above mean sea level (levels by Corps of Engineers). Prior to Jan. 23, 1936, nonrecording gage at site 800 ft upstream at datum 1.50 ft higher. July 25 to Sept. 27, 1936, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--43 years, 121 cfs (15.21 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,620 cfs Oct. 31 (gage height, 7.63 ft); minimum, 52 cfs Oct. 14 (gage height, 1.51 ft).

Period of record: Maximum discharge, 17,200 cfs Oct. 9, 1947 (gage height, 15.80 ft), from rating curve extended above 7,200 cfs on basis of velocity-area study; minimum, 14 cfs Aug. 11, 1956 (gage height, 1.10 ft).

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1303: 1929-32(M), 1934(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	396	86	90	82	140	118	107	161	106	95	66
2	62	217	86	88	56	150	120	103	135	109	216	66
3	60	199	84	88	59	387	124	103	126	222	116	66
4	57	169	82	93	103	398	115	101	121	113	88	68
5	53	146	76	608	132	214	113	99	126	97	82	66
6	53	124	78	286	233	185	195	103	111	91	82	65
7	53	115	76	175	250	169	378	126	202	91	82	62
8	53	109	76	140	428	148	207	120	204	86	76	62
9	53	103	78	128	317	140	164	109	173	86	72	59
10	57	115	78	121	172	138	146	101	121	104	72	58
11	57	233	78	113	143	136	133	99	111	100	72	101
12	57	161	78	109	123	128	128	115	113	106	106	106
13	55	166	80	105	479	128	124	1,110	121	90	76	113
14	53	133	76	103	347	124	120	353	106	84	70	81
15	73	161	76	101	159	133	118	217	104	79	68	70
16	71	128	94	94	156	153	118	691	149	77	65	66
17	57	115	148	89	146	126	115	275	129	81	65	66
18	55	109	101	84	138	122	113	192	113	72	91	71
19	57	105	92	86	128	133	111	161	109	102	82	81
20	58	105	86	86	129	148	111	143	102	90	71	82
21	113	118	204	82	126	128	111	146	97	77	66	93
22	167	101	310	94	458	124	118	124	135	74	152	129
23	71	96	161	103	1,240	120	111	116	106	72	190	100
24	67	90	138	99	256	118	120	111	104	71	84	84
25	65	88	120	109	207	115	109	111	93	81	74	76
26	64	90	109	101	180	124	103	109	91	82	71	72
27	62	90	101	86	172	125	103	102	90	81	86	71
28	62	90	96	86	150	161	150	172	86	76	84	70
29	64	86	92	90	------	146	122	342	91	146	71	68
30	562	86	92	92	------	130	111	489	209	146	68	66
31	2,640	------	90	90	------	122	------	224	------	106	65	------
TOTAL	5,033	4,044	3,222	3,815	6,748	4,814	4,029	6,474	3,739	2,998	2,758	2,304
MEAN	162	135	104	123	241	155	134	209	125	96.7	89.0	76.8
MAX	2,640	396	310	608	1,240	398	378	1,110	209	222	216	129
MIN	53	86	76	82	82	115	103	99	86	71	65	58
CFSM	1.50	1.25	.96	1.14	2.23	1.44	1.24	1.94	1.16	.90	.82	.71
IN.	1.73	1.39	1.11	1.31	2.32	1.66	1.39	2.23	1.29	1.03	.95	.79

CAL YR 1970 TOTAL 44,302 MEAN 121 MAX 2,640 MIN 49 CFSM 1.12 IN 15.26
WTR YR 1971 TOTAL 49,978 MEAN 137 MAX 2,640 MIN 53 CFSM 1.27 IN 17.21

PEAK DISCHARGE (BASE, 1,400 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	1400	7.63	3,620	9-13	1300	4.89	1,550
2-23	0700	5.65	2,000				

02070500 MAYO RIVER NEAR PRICE, N. C.

LOCATION.--Lat 36°32'02", long 79°59'31", Rockingham County, on right bank 300 ft downstream from Anglins Bridge on Secondary Road 1358, 0.5 mile downstream from confluence of North and South Mayo Rivers, 0.8 mile downstream from Virginia-North Carolina State line, and 4 miles west of Price.

DRAINAGE AREA.--260 sq mi.

PERIOD OF RECORD.--July 1929 to September 1971 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 689.95 ft above mean sea level. Prior to Oct. 29, 1929, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--42 years, 312 cfs (16.30 inches per year).

EXTREMES.--Current year: Maximum discharge, 9,900 cfs Oct. 31 (gage height, 8.75 ft); minimum, 99 cfs Oct. 10, 11 (gage height, 1.01 ft).

Period of record: Maximum discharge, 30,000 cfs Oct. 19, 1937 (gage height, 14.00 ft), from rating curve extended above 8,000 cfs; minimum, 32 cfs Oct. 8, 1954 (gage height, 0.55 ft).

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1433: 1930-31(m), 1932, 1949(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	1,020	206	215	169	363	285	264	389	272	263	167
2	137	571	204	225	170	356	287	258	341	276	418	167
3	136	490	201	225	215	828	305	255	329	374	334	165
4	127	414	199	236	227	900	280	250	318	267	242	165
5	123	357	188	1,370	291	510	272	246	323	240	241	167
6	124	308	191	665	519	431	468	249	317	238	230	160
7	124	283	196	415	581	395	879	298	369	242	224	155
8	125	263	186	336	1,020	355	524	293	380	230	206	155
9	126	248	188	308	759	335	413	264	379	231	231	150
10	129	291	189	288	424	325	362	250	309	311	193	165
11	127	520	189	271	352	322	333	243	292	274	195	223
12	128	363	191	260	319	309	321	270	290	372	297	242
13	126	384	196	250	1,060	304	311	2,610	331	245	207	273
14	124	306	184	247	847	299	330	889	296	228	186	195
15	181	362	181	242	500	319	289	551	292	213	178	167
16	159	300	215	230	407	373	288	1,520	332	207	172	161
17	130	271	331	228	356	304	282	668	329	206	172	164
18	128	257	233	227	330	290	279	491	310	192	245	186
19	128	248	214	219	313	321	272	419	282	252	237	218
20	131	250	206	190	316	365	269	378	275	240	193	228
21	257	283	392	215	304	311	270	350	268	207	179	275
22	258	244	626	232	1,170	300	290	330	308	199	217	349
23	172	235	366	248	2,840	293	271	310	275	193	399	267
24	155	223	342	237	708	281	291	303	268	186	211	217
25	149	215	288	266	513	276	264	303	258	226	186	191
26	148	218	265	244	441	300	257	300	246	228	178	180
27	145	216	244	215	416	302	253	292	240	220	234	176
28	144	217	230	180	368	362	371	408	230	226	225	169
29	147	212	220	225	------	337	313	746	235	280	180	162
30	1,530	210	200	236	------	310	272	958	430	441	171	157
31	6,850	------	200	227	------	292	------	498	------	302	169	------
TOTAL	12,608	9,779	7,451	9,172	15,955	11,348	9,871	15,464	9,261	7,818	6,983	5,796
MEAN	407	326	240	296	570	366	329	499	308	252	225	193
MAX	6,850	1,020	626	1,370	2,840	900	879	2,610	430	441	418	349
MIN	123	210	181	180	170	276	253	243	230	186	169	145
CFSM	1.57	1.25	.92	1.14	2.19	1.41	1.27	1.92	1.18	.97	.87	.74
IN.	1.80	1.40	1.07	1.31	2.28	1.62	1.41	2.21	1.32	1.12	1.00	.83

CAL YR 1970 TOTAL 106,873 MEAN 293 MAX 6,850 MIN 123 CFSM 1.13 IN 15.29
WTR YR 1971 TOTAL 121,486 MEAN 333 MAX 6,850 MIN 123 CFSM 1.28 IN 17.38

PEAK DISCHARGE (BASE, 3,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
10-31	0700	8.75	9,900	5-13	0930	5.76	4,020
2-23	0100	6.54	5,270				

02072000 SMITH RIVER NEAR PHILPOTT, VA.

LOCATION.--Lat 36°46'50", long 80°01'30", Franklin County, on left bank 900 ft downstream from Philpott Dam, 3.1 miles west of Philpott, 11.6 miles upstream from Reed Creek, and at mile 44.1.

DRAINAGE AREA.--216 sq mi.

PERIOD OF RECORD.--August 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 804.27 ft above mean sea level (Corps of Engineers bench mark). Prior to Oct. 8, 1952, at site 1.9 miles downstream at different datum.

AVERAGE DISCHARGE.--25 years, 267 cfs (16.79 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 1,580 cfs May 20 (gage height, 5.27 ft); minimum, 12 cfs Dec. 7, 8 (gage height, 1.88 ft); minimum daily, 44 cfs Aug. 14, 15.

Period of record: Maximum discharge, 17,000 cfs June 29, 1949 (gage height, 20.3 ft, site and datum then in use), from rating curve extended above 9,700 cfs on basis of slope-area measurements at gage heights 18.2 and 20.3 ft; minimum, 4.0 cfs Aug. 12, 1953 (gage height, 1.50 ft); minimum daily, 24 cfs Dec. 16, 17, 1967.

REMARKS.--Records good. Since August 1950, flow regulated by Philpott Lake 0.2 mile upstream (see sta 02071900).

REVISIONS (WATER YEARS).--WSP 1553: 1953(M), 1955-56(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	205	48	471	45	204	686	200	45	741	206	47	261
2	207	693	471	45	205	686	202	45	744	205	240	261
3	49	688	471	45	207	683	47	450	745	49	239	260
4	50	691	471	365	206	687	46	450	751	50	239	49
5	207	689	45	365	204	686	521	450	48	49	238	49
6	208	691	45	364	46	45	520	450	48	340	239	49
7	208	45	313	363	45	45	519	450	421	636	47	260
8	207	45	313	364	203	687	518	45	418	635	47	260
9	208	692	312	45	203	687	411	45	419	642	338	259
10	49	691	313	45	202	691	45	205	421	47	338	259
11	50	689	313	531	200	692	45	205	418	47	338	48
12	209	689	45	526	205	693	569	205	120	285	333	49
13	214	691	45	530	46	45	572	204	49	290	339	245
14	210	45	202	529	45	45	570	735	311	289	44	242
15	209	45	202	528	687	581	570	686	366	290	44	262
16	208	690	203	45	687	582	570	682	366	289	259	262
17	48	688	201	45	687	582	45	735	366	47	260	262
18	48	690	202	476	685	585	45	736	366	48	260	49
19	208	692	45	473	652	587	370	737	48	240	259	49
20	207	696	45	471	45	46	370	739	48	240	259	261
21	208	45	413	474	45	46	370	744	423	239	48	261
22	208	45	416	473	699	148	370	47	420	239	49	259
23	207	700	414	45	689	148	370	47	418	239	259	260
24	48	696	416	45	684	147	45	686	419	47	260	259
25	48	686	45	203	688	147	45	685	422	47	260	48
26	149	45	45	202	686	148	170	686	48	190	261	48
27	148	702	45	204	51	46	170	687	48	189	260	204
28	150	45	416	203	45	46	170	691	206	189	48	206
29	147	45	417	204	------	201	170	48	202	190	49	203
30	176	472	414	45	------	202	170	47	206	190	260	203
31	52	------	417	45	------	201	------	741	------	47	260	------
TOTAL	4,750	14,069	8,186	8,343	9,291	11,501	8,805	13,408	10,026	6,730	6,421	5,647
MEAN	153	469	264	269	332	371	294	433	334	217	207	188
MAX	214	702	471	531	699	693	572	744	751	642	339	262
MIN	48	45	45	45	45	45	45	45	48	47	44	48
(*)	+172	-115	-35	-11	+165	-39	-6	+46	-55	-6	-55	-18
MEAN‡	325	354	229	258	497	332	288	479	279	211	152	170
CFSM‡	1.50	1.64	1.06	1.19	2.30	1.54	1.33	2.22	1.29	.98	.70	.79
IN.‡	1.73	1.83	1.22	1.37	2.40	1.78	1.48	2.56	1.44	1.13	.81	.88

CAL YR 1970 TOTAL 99,080 MEAN 271 MAX 766 MIN 45 MEAN‡ 267 CFSM‡ 1.24 IN.‡ 16.81
WTR YR 1971 TOTAL 107,177 MEAN 294 MAX 751 MIN 44 MEAN‡ 297 CFSM‡ 1.37 IN.‡ 18.65

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN PHILPOTT LAKE; FURNISHED BY CORPS OF ENGINEERS.
‡ ADJUSTED FOR CHANGE IN CONTENTS.

02072500 SMITH RIVER AT BASSETT, VA.

LOCATION.--Lat 36°46'15", long 80°00'00", Henry County, on left bank 5 ft upstream from bridge on State Highway 666 at north edge of North Bassett, 1.0 mile northwest of Bassett, 3.0 miles downstream from Town Creek, 5.6 miles upstream from Reed Creek, 6.2 miles downstream from Philpott Dam, and at mile 38.1.

DRAINAGE AREA.--259 sq mi.

PERIOD OF RECORD.--April 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 753.09 ft above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--32 years, 318 cfs (16.67 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 3,620 cfs Feb. 22 (gage height, 5.35 ft); minimum, 55 cfs Oct. 10 (gage height, 1.47 ft); minimum daily, 63 cfs Oct. 4, 11.

Period of record: Maximum discharge, 26,600 cfs Aug. 14, 1940 (gage height, 18.28 ft); minimum, 19 cfs July 19, 1956; minimum daily, 44 cfs Aug. 23, 1964; minimum gage height, 1.06 ft Sept. 18, 26, 1953.

Flood of Oct. 19, 1937, reached a stage of about 22.9 ft, from information by local residents (discharge, 38,200 cfs, from rating curve extended above 24,000 cfs on basis of backwater studies and records for station at Martinsville).

REMARKS.--Records good. Since August 1950, flow regulated by Philpott Lake 6.2 miles upstream (see sta 02071900). Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	220	161	496	93	229	725	242	85	800	271	87	280
2	220	746	495	80	231	739	248	84	792	269	303	280
3	65	760	495	79	236	826	94	480	784	141	291	279
4	63	741	493	406	241	828	88	495	786	95	296	71
5	216	724	78	764	274	762	550	493	104	88	316	69
6	221	724	75	482	130	118	632	512	93	403	292	68
7	220	92	333	431	143	108	664	526	478	724	80	280
8	219	83	342	419	368	734	595	162	469	725	76	281
9	219	707	341	101	321	733	470	102	464	734	391	277
10	67	724	342	92	266	736	110	247	460	97	392	276
11	63	771	341	561	252	736	96	242	454	81	402	85
12	218	739	85	560	257	735	608	294	163	343	430	105
13	225	732	75	565	421	97	612	1,040	92	346	398	277
14	220	99	229	567	189	92	610	863	346	344	78	257
15	228	108	230	562	759	630	612	772	403	342	74	283
16	225	722	257	91	748	626	610	931	430	341	282	284
17	67	723	262	83	740	623	100	832	416	77	284	291
18	64	717	242	505	732	624	88	804	410	86	301	76
19	218	719	83	503	734	635	383	793	92	307	290	87
20	222	735	80	500	100	99	395	681	88	291	286	314
21	274	100	500	504	93	91	394	914	460	286	73	311
22	234	88	508	506	1,100	190	394	107	458	287	85	315
23	226	718	471	89	969	192	396	94	461	286	298	298
24	71	718	460	94	778	189	102	717	458	76	284	292
25	68	722	98	239	755	189	84	725	456	77	283	78
26	165	84	85	240	745	197	183	721	85	238	283	75
27	167	723	82	233	114	98	185	722	82	234	286	227
28	168	83	440	235	100	106	206	755	237	232	74	230
29	173	80	448	237	------	253	189	162	238	238	71	229
30	791	493	446	86	------	248	186	238	310	245	280	229
31	921	------	449	81	------	245	------	822	------	85	280	------
TOTAL	6,738	15,336	9,361	9,977	12,024	13,204	10,126	16,415	11,369	8,389	7,646	6,504
MEAN	217	511	302	322	429	426	338	530	379	271	247	217
MAX	921	771	508	764	1,100	828	664	1,040	800	734	430	315
MIN	63	80	75	79	93	91	84	84	82	76	71	68
(*)	+172	-115	-35	-11	+165	-39	-6	+46	-55	-6	-55	-18
MEAN‡	389	396	267	311	594	387	332	576	324	265	192	199
CFSM‡	1.50	1.53	1.03	1.20	2.29	1.49	1.28	2.22	1.25	1.02	.74	.77
IN.‡	1.73	1.71	1.19	1.38	2.38	1.72	1.43	2.56	1.40	1.18	.85	.86

CAL YR 1970 TOTAL 114,357 MEAN 313 MAX 1,570 MIN 60 MEAN‡ 309 CFSM‡ 1.19 IN.‡ 16.22
WTR YR 1971 TOTAL 127,089 MEAN 348 MAX 1,100 MIN 63 MEAN‡ 351 CFSM‡ 1.36 IN.‡ 18.41

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN PHILPOTT LAKE; FURNISHED BY CORPS OF ENGINEERS.
‡ ADJUSTED FOR CHANGE IN CONTENTS.

02073000 SMITH RIVER AT MARTINSVILLE, VA.

LOCATION (revised).--Lat 36°39'40", long 79°52'51", Henry County, on right bank 800 ft downstream from bridge on U.S. Highways 58 and 220, at south edge of Martinsville, and 5.0 miles downstream from Beaver Creek.

DRAINAGE AREA.--380 sq mi.

PERIOD OF RECORD.--August 1929 to current year.

GAGE.--Water-stage recorder. Datum of gage is 657.22 ft above mean sea level.

AVERAGE DISCHARGE.--42 years, 438 cfs (15.65 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 5,840 cfs Oct. 31 (gage height, 7.00 ft); minimum, 9.8 cfs Aug. 26 (gage height, 0.79 ft); minimum daily, 53 cfs May 23.

Period of record: Maximum discharge, 39,000 cfs Oct. 19, 1937 (gage height, 21.50 ft), from rating curve extended above 14,000 cfs on basis of computations of flow over dam at gage heights 16.76 and 21.50 ft; minimum, 3.8 cfs Mar. 19, 1955; minimum daily, 19 cfs Oct. 6, 1935; minimum gage height, 0.69 ft Sept. 8, 1969.

REMARKS.--Records good. Flow regulated since August 1950, by Philpott Lake 19.6 miles upstream (see sta 02071900). Some additional regulation by powerplant 1,000 ft above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1032: 1933-35(M), 1936-39, 1940-41(P). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	230	574	606	367	214	594	370	180	912	413	169	330
2	284	759	606	157	312	892	376	172	922	439	387	348
3	179	948	614	184	345	1,280	331	458	911	336	398	345
4	87	921	614	374	374	1,250	211	606	901	182	369	231
5	191	876	312	1,530	467	975	484	589	460	182	513	125
6	262	885	172	903	563	558	826	600	191	379	387	141
7	266	367	200	654	395	245	1,090	686	399	722	250	240
8	272	180	438	598	798	638	845	452	605	812	131	336
9	266	638	446	423	815	856	686	218	577	923	350	340
10	211	876	416	200	456	855	439	351	555	571	464	334
11	92	993	430	416	448	858	209	342	546	201	472	221
12	197	912	374	686	417	849	510	412	467	352	590	251
13	273	912	143	670	1,090	424	743	2,070	212	428	481	380
14	278	494	196	686	578	217	731	1,020	325	421	289	340
15	302	267	306	686	768	569	733	1,040	580	414	137	295
16	300	670	409	416	924	765	736	1,760	677	416	282	347
17	193	867	454	160	896	737	444	1,020	555	243	348	365
18	107	849	348	446	879	730	206	778	522	131	448	244
19	196	804	284	606	873	785	397	860	316	367	395	138
20	278	885	150	598	497	507	505	780	190	374	373	310
21	408	416	654	606	207	180	505	906	430	352	239	407
22	387	188	912	582	1,330	245	524	402	566	369	300	410
23	293	654	734	416	2,150	280	514	53	612	352	421	392
24	232	788	638	180	1,060	346	337	182	563	238	364	373
25	112	840	438	241	903	289	168	652	540	117	362	257
26	181	423	205	381	905	342	308	691	301	258	335	145
27	230	606	168	324	528	285	278	544	169	333	404	208
28	212	388	330	306	238	282	408	762	288	296	264	298
29	268	164	558	336	------	285	299	828	335	416	120	288
30	1,610	402	542	223	------	387	296	922	458	435	254	298
31	2,710	------	574	160	------	376	------	822	------	244	345	------
TOTAL	11,107	19,546	13,271	14,555	19,430	17,881	14,509	21,158	15,085	11,716	10,641	8,745
MEAN	358	652	428	470	694	577	484	683	503	378	343	292
MAX	2,710	993	912	1,530	2,150	1,280	1,090	2,070	922	923	590	410
MIN	87	164	143	157	207	180	168	53	169	117	120	125
(*)	+172	-115	-35	-11	+165	-39	-6	+46	-55	-6	-55	-18
MEAN‡	530	537	393	459	859	538	478	729	448	372	288	274
CFSM‡	1.39	1.41	1.03	1.21	2.26	1.42	1.26	1.92	1.18	.98	.76	.72
IN.‡	1.60	1.57	1.19	1.40	2.35	1.64	1.41	2.21	1.32	1.13	.88	.80

CAL YR 1970 TOTAL 155,303 MEAN 425 MAX 2,710 MIN 82 MEAN‡ 421 CFSM‡ 1.11 IN.‡ 15.06
WTR YR 1971 TOTAL 177,644 MEAN 487 MAX 2,710 MIN 53 MEAN‡ 490 CFSM‡ 1.29 IN.‡ 17.50

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND IN PHILPOTT LAKE; FURNISHED BY CORPS OF ENGINEERS.
‡ ADJUSTED FOR CHANGE IN CONTENTS.

02074000 SMITH RIVER AT EDEN, N. C.
(Formerly published as Smith River at Spray, N. C.)

LOCATION (revised).--Lat 36°31'31", long 79°45'57", Rockingham County, on right bank at Eden, 0.3 mile downstream from bridge on State Highway 14, 0.8 mile upstream from bridge on Secondary Road 1714, 1.2 miles south of Virginia-North Carolina State line, 1.3 miles downstream from Stuart Creek, and 3.9 miles upstream from mouth.

DRAINAGE AREA.--538 sq mi.

PERIOD OF RECORD.--October 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 539.56 ft above mean sea level.

AVERAGE DISCHARGE.--32 years, 585 cfs (14.77 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 8,270 cfs Oct. 31 (gage height, 8.93 ft); minimum, 76 cfs Oct. 18 (gage height, 1.42 ft); minimum daily, 111 cfs Oct. 4.

Period of record: Maximum discharge, 45,600 cfs Aug. 15, 1940 (gage height, 19.28 ft), from rating curve extended above 12,000 cfs on basis of computation of peak flow over dam 1.5 miles downstream; minimum, 38 cfs Aug. 7, 1967; minimum daily, 46 cfs Aug. 14, 1967.

REMARKS.--Records good. Flow regulated since August 1950 by Philpott Lake (see sta 02071900) 40 miles upstream (usable capacity, 6,325,000,000 cu ft). Some additional regulation by hydroelectric plant at Martinsville, Va., 18 miles upstream. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1433: 1946. WRD N. C. 1968: 1967.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	303	973	614	609	224	415	465	405	1,310	536	324	400
2	302	652	616	246	323	1,020	459	261	1,180	736	327	380
3	324	1,080	618	222	373	1,890	505	330	1,130	572	571	402
4	111	1,060	615	290	418	2,070	267	700	1,110	369	494	431
5	147	1,080	608	2,800	491	1,350	349	694	1,090	264	611	170
6	272	972	185	1,690	758	1,130	1,010	709	361	320	509	210
7	279	891	195	1,010	826	449	1,690	824	357	617	482	188
8	288	243	423	786	1,780	456	1,190	798	818	935	241	347
9	282	284	459	697	1,480	993	974	354	877	926	226	293
10	297	862	449	347	800	978	795	316	763	1,640	536	400
11	122	1,100	450	372	627	973	353	450	730	427	539	401
12	158	1,020	471	775	558	960	400	479	753	384	700	495
13	282	1,000	182	737	1,260	931	853	3,430	552	556	650	552
14	287	928	208	751	1,340	287	840	1,350	359	534	500	449
15	294	470	333	753	700	343	825	1,380	620	529	220	405
16	376	407	381	697	1,120	908	828	3,620	1,030	521	350	413
17	293	941	627	243	1,040	844	806	1,750	812	513	500	441
18	131	905	439	292	1,010	818	275	1,330	740	211	550	443
19	178	894	410	639	977	877	293	1,210	715	283	500	219
20	280	908	214	625	966	986	595	1,090	348	494	450	263
21	386	935	493	638	311	331	600	1,120	331	445	400	470
22	553	240	1,500	664	689	297	611	1,040	760	439	350	491
23	341	282	949	681	4,740	415	608	356	731	436	500	475
24	340	856	789	248	1,650	383	642	338	811	443	450	444
25	170	849	684	300	1,310	380	284	928	724	231	420	439
26	158	852	297	425	1,170	408	263	982	718	263	400	204
27	255	233	270	375	1,110	448	375	962	282	404	500	206
28	259	851	275	354	437	374	512	1,150	291	403	450	361
29	260	201	589	378	------	368	472	1,610	465	471	210	345
30	1,330	253	581	409	------	508	410	1,850	723	1,100	300	347
31	5,120	------	610	243	------	445	------	1,000	------	517	450	------
TOTAL	14,178	22,222	15,534	19,296	28,488	23,035	18,549	32,816	21,491	16,519	13,710	11,084
MEAN	457	741	501	622	1,017	743	618	1,059	716	533	442	369
MAX	5,120	1,100	1,500	2,800	4,740	2,070	1,690	3,620	1,310	1,640	700	552
MIN	111	201	182	222	224	287	263	261	282	211	210	170
(*)	+172	-115	-35	-11	+165	-39	-6	+46	-55	-6	-55	-18

CAL YR 1970 TOTAL 200,387 MEAN 549 MAX 5,120 MIN 91 MEAN‡ 545 CFSM‡ 1.01 IN.‡ 13.76
WTR YR 1971 TOTAL 236,922 MEAN 649 MAX 5,120 MIN 111 MEAN‡ 652 CFSM‡ 1.21 IN.‡ 16.46

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN PHILPOTT LAKE; FURNISHED BY CORPS OF ENGINEERS.
‡ ADJUSTED FOR CHANGE IN CONTENTS.

02074500 SANDY RIVER NEAR DANVILLE, VA.

LOCATION.--Lat 36°37'10", long 79°30'16" (revised), Pittsylvania County, on right bank 200 ft downstream from Hickory Forest Creek, 400 ft upstream from bridge on State Highway 863 between Callahans Store and Mount Cross, 5.5 miles northwest of western corporate limits of Danville, and 5.8 miles upstream from mouth.

DRAINAGE AREA.--112 sq mi.

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Datum of gage is 460.38 ft above mean sea level. Prior to June 26, 1942, at site 1,200 ft downstream at datum 5.57 ft lower.

AVERAGE DISCHARGE.--42 years, 100 cfs (12.12 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,330 cfs May 13 (gage height, 6.01 ft); minimum, 18 cfs Oct. 22 (gage height, 1.08 ft).

Period of record: Maximum discharge, 23,000 cfs Aug. 14, 1940 (gage height, 14.8 ft, present datum, from floodmarks), from rating curve extended above 3,600 cfs; minimum, 3 cfs Sept. 29, 1930 (gage height, 0.40 ft, site and datum then in use); minimum daily, 8 cfs Aug. 29, 31, Sept. 1, 2, 1932.

REMARKS.--Records good. Diurnal fluctuation at low flow caused by small mill above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 972: 1930-41. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	93	51	58	62	103	82	73	165	109	78	46
2	27	69	51	57	62	112	85	71	130	172	63	48
3	27	68	51	58	66	442	101	69	116	101	57	46
4	23	80	50	76	69	431	87	69	105	82	54	48
5	22	116	48	866	89	193	83	68	97	76	85	48
6	24	69	49	334	145	150	181	71	91	76	60	46
7	26	60	48	162	360	125	339	85	87	76	56	44
8	26	54	48	119	960	112	201	80	99	73	51	42
9	27	51	48	105	522	101	142	71	95	71	49	41
10	28	57	49	95	185	97	118	66	83	73	48	41
11	29	103	49	87	138	95	103	63	80	87	56	49
12	28	103	49	82	121	91	99	165	83	83	97	164
13	28	112	49	78	591	89	97	1,680	105	69	56	179
14	27	95	48	78	360	87	91	280	83	64	49	66
15	37	214	48	76	175	93	85	214	80	60	48	56
16	36	112	58	71	138	101	85	1,940	91	60	45	51
17	30	83	95	69	118	83	83	572	89	58	46	57
18	29	73	64	68	107	80	82	196	85	56	80	60
19	30	68	58	66	99	93	78	142	80	66	66	58
20	31	68	56	62	99	116	78	121	89	66	56	54
21	44	69	130	68	93	91	78	150	87	57	49	60
22	58	62	254	68	123	87	80	99	74	56	158	60
23	41	60	130	73	680	83	78	87	74	54	116	62
24	36	54	123	72	201	80	83	83	73	56	62	56
25	36	56	89	82	145	78	74	82	68	73	53	51
26	36	54	80	73	125	85	71	78	69	64	50	50
27	36	54	69	63	128	89	69	73	64	58	53	50
28	36	54	68	62	112	103	107	182	63	58	57	49
29	37	53	66	69	------	97	87	544	68	64	49	48
30	111	53	63	71	------	89	74	912	173	107	48	48
31	307	------	62	68	------	83	------	254	------	82	46	------
TOTAL	1,340	2,317	2,201	3,436	6,073	3,759	3,101	8,640	2,746	2,307	1,941	1,778
MEAN	43.2	77.2	71.0	111	217	121	103	279	91.5	74.4	62.6	59.3
MAX	307	214	254	866	960	442	339	1,940	173	172	158	179
MIN	22	51	48	57	62	78	69	63	63	54	45	41
CFSM	.39	.69	.63	.99	1.94	1.08	.92	2.49	.82	.66	.56	.53
IN.	.45	.77	.73	1.14	2.02	1.25	1.03	2.87	.91	.77	.64	.59

CAL YR 1970 TOTAL 30,304 MEAN 83.0 MAX 1,930 MIN 21 CFSM .74 IN 10.07
WTR YR 1971 TOTAL 39,639 MEAN 109 MAX 1,940 MIN 22 CFSM .97 IN 13.17

PEAK DISCHARGE (BASE 1,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5-13	0400	6.01	3,330	5-16	0530	5.41	2,510

02075000 DAN RIVER AT DANVILLE, VA.

LOCATION.--Lat 36°35'15", long 79°22'55", Danville City, on left bank 50 ft downstream from Southern Railway bridge, 1,000 ft upstream from Fall Creek, and at mile 62.7.

DRAINAGE AREA.--2,050 sq mi, approximately.

PERIOD OF RECORD.--August 1934 to current year. Gage-height records collected in this vicinity 1890-1934, at same site 1934-49, and at Main Street Bridge, 0.25 mile upstream 1949-68, are contained in reports of the National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 379.29 ft above mean sea level.

AVERAGE DISCHARGE.--37 years, 2,246 cfs (14.88 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 19,900 cfs May 13 (gage height, 11.65 ft); minimum, 255 cfs Oct. 6 (gage height, 2.18 ft); minimum daily, 479 cfs Oct. 5.

Period of record: Maximum discharge, 75,000 cfs Aug. 15, 1940 (gage height, 20.96 ft); minimum, 11 cfs Sept. 5, 1966 (gage height, 1.18 ft); minimum daily, 110 cfs Sept. 5, 1966.

REMARKS.--Records good. Diurnal fluctuation caused by cotton mills above station. Since August 1950, flow regulated by Philpott Lake 74.7 miles upstream (see sta 02071900). Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 972: 1936.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	679	17,300	1,320	1,610	1,300	2,060	1,770	1,420	3,540	2,010	1,530	889
2	704	6,900	1,450	1,370	1,050	2,580	1,680	1,230	3,010	1,650	1,320	896
3	669	3,460	1,420	1,170	1,040	5,550	1,880	1,260	2,660	1,520	1,480	910
4	667	3,160	1,380	1,270	1,570	11,600	1,810	1,400	2,440	1,430	1,860	884
5	479	2,820	1,350	6,620	1,670	6,050	1,590	1,580	2,410	1,130	1,540	920
6	483	2,410	1,120	9,860	3,180	4,100	2,590	1,570	1,760	952	1,530	704
7	675	2,180	911	4,340	4,960	2,950	6,300	1,630	1,500	1,120	1,320	787
8	618	1,510	942	2,960	11,900	2,460	5,340	1,820	1,580	1,540	1,230	704
9	594	1,240	1,210	2,460	9,660	2,560	3,600	1,600	2,080	1,520	1,000	908
10	602	1,680	1,270	2,090	4,990	2,580	2,750	1,300	2,220	2,160	921	858
11	682	2,550	1,230	1,650	3,240	2,490	2,160	1,240	1,730	2,520	1,070	938
12	488	3,120	1,260	1,780	2,700	2,400	1,770	1,210	1,670	1,630	1,670	1,690
13	538	2,920	1,210	2,000	3,610	2,280	2,060	15,200	1,700	1,270	2,050	2,820
14	658	2,610	976	1,920	7,080	1,750	2,110	14,900	1,730	1,260	1,410	1,490
15	789	3,050	963	1,890	4,470	1,650	2,020	5,360	1,410	1,180	1,110	1,190
16	970	2,680	1,180	1,880	3,670	2,160	1,960	15,300	2,080	1,010	953	949
17	950	2,390	1,870	1,470	3,220	2,380	1,930	12,200	2,210	970	725	989
18	735	2,230	1,930	1,270	2,880	2,100	1,580	4,960	1,920	1,100	1,130	1,060
19	516	1,940	1,460	1,470	2,710	2,090	1,390	3,730	1,670	890	1,380	1,080
20	586	1,940	1,250	1,510	2,580	2,530	1,450	3,130	1,670	1,030	1,180	1,180
21	771	1,940	1,470	1,410	2,040	2,130	1,530	2,870	1,410	1,190	1,010	1,120
22	1,090	1,640	3,170	1,540	1,840	1,710	1,700	2,740	1,420	1,120	1,300	1,440
23	1,310	1,280	3,130	1,780	11,000	1,600	1,760	1,850	1,960	1,030	1,530	1,690
24	1,170	1,700	2,380	1,530	10,500	1,560	1,700	1,550	2,100	930	1,650	1,410
25	1,020	1,760	2,240	1,550	4,440	1,540	1,540	1,900	1,710	1,040	1,110	1,200
26	852	1,710	1,750	1,760	3,470	1,510	1,270	2,160	1,450	1,080	1,070	1,090
27	744	1,330	1,390	1,650	3,140	1,690	1,260	2,080	1,230	1,030	1,040	981
28	717	1,590	1,400	1,410	2,630	1,870	1,480	2,510	1,140	1,100	1,130	818
29	708	1,200	1,150	1,080	------	2,060	2,150	5,370	900	1,430	1,150	1,010
30	762	1,080	1,410	1,320	------	2,100	1,790	6,850	1,640	2,500	852	978
31	9,300	------	1,450	1,660	------	1,950	------	4,610	------	2,530	785	------
TOTAL	31,526	83,320	46,642	67,280	116,580	84,040	63,920	126,530	55,950	42,872	39,036	33,583
MEAN	1,017	2,777	1,505	2,170	4,164	2,711	2,131	4,082	1,865	1,383	1,259	1,119
MAX	9,300	17,300	3,170	9,860	11,900	11,600	6,300	15,300	3,540	2,530	2,050	2,820
MIN	479	1,080	911	1,080	1,040	1,510	1,260	1,210	900	890	725	704
(*)	+172	-115	-35	-11	+165	-39	-6	+46	-55	-6	-55	-18
MEAN‡	1,189	2,662	1,470	2,159	4,329	2,672	2,125	4,128	1,810	1,377	1,204	1,101
CFSM‡	.58	1.30	.72	1.05	2.11	1.30	1.04	2.01	.88	.67	.59	.54
IN.‡	.67	1.45	.83	1.21	2.20	1.50	1.16	2.32	.98	.77	.68	.60

CAL YR 1970 TOTAL 681,105 MEAN 1,866 MAX 23,500 MIN 479 MEAN‡ 1,862 CFSM‡ .91 IN.‡ 12.33
WTR YR 1971 TOTAL 791,279 MEAN 2,168 MAX 17,300 MIN 479 MEAN‡ 2,171 CFSM‡ 1.06 IN.‡ 14.38

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN PHILPOTT LAKE; FURNISHED BY CORPS OF ENGINEERS.
‡ ADJUSTED FOR CHANGE IN CONTENTS.

02075500 DAN RIVER AT PACES, VA.

LOCATION.--Lat 36°38'32", long 79°05'23", Halifax County, on right bank 100 ft upstream from bridge on State Highway 658, 0.5 mile southeast of Paces, 0.5 mile upstream from Big Toby Creek, 2.7 miles upstream from Birch Creek, and at mile 36.0.

DRAINAGE AREA.--2,550 sq mi, approximately.

PERIOD OF RECORD.--November 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 322.48 ft above mean sea level.

AVERAGE DISCHARGE.--20 years (1951-71), 2,584 cfs (13.76 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 20,500 cfs May 17 (gage height, 21.05 ft); minimum, 406 cfs Oct. 7 (gage height, 2.44 ft); minimum daily, 459 cfs Oct. 6.

Period of record: Maximum discharge, 34,000 cfs Oct. 17, 1954 (gage height, 25.40 ft); minimum, 193 cfs Sept. 4, 1956 (gage height, 1.71 ft); minimum daily, 244 cfs Sept. 4, 1956.

Flood of Aug. 16, 1940, reached a stage of 32.3 ft, from floodmark.

REMARKS.--Records good. Diurnal fluctuation caused by cotton mills at Danville. Since August 1950, flow regulated by Philpott Lake 101.4 miles upstream (see sta 02071900). Water-quality records for the current year are included in this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	840	14,900	1,330	1,870	1,930	3,000	2,480	2,070	4,330	2,460	2,810	1,080
2	764	16,300	1,710	1,870	1,480	2,870	2,340	1,860	3,740	2,290	1,860	1,080
3	730	4,690	1,740	1,580	1,360	5,530	2,490	1,790	3,330	1,920	1,890	1,080
4	732	3,760	1,690	1,580	1,670	13,400	2,670	1,680	3,040	1,870	2,470	1,040
5	701	3,480	1,640	4,310	2,120	12,600	2,340	1,950	2,870	1,680	2,050	1,130
6	459	3,110	1,610	12,600	2,340	6,050	2,930	2,010	2,810	1,460	2,090	942
7	598	2,730	1,130	7,280	5,800	4,400	7,370	2,030	2,100	1,250	1,700	869
8	682	2,460	1,100	4,150	12,700	3,430	8,370	2,130	2,030	1,570	1,520	833
9	675	1,690	1,320	3,300	17,000	3,070	5,160	2,310	2,230	1,880	1,240	859
10	619	1,620	1,460	2,950	11,500	3,260	3,850	1,960	2,630	2,150	1,050	1,020
11	689	2,680	1,430	2,450	5,110	3,170	3,230	1,640	2,430	3,110	1,280	995
12	699	3,670	1,520	2,150	3,620	3,050	2,600	1,650	2,070	2,290	1,600	3,790
13	512	3,640	1,470	2,480	3,900	2,900	2,480	7,500	2,250	1,670	2,620	3,950
14	624	3,360	1,210	2,440	7,500	2,820	2,720	18,200	2,170	1,650	2,100	2,610
15	775	4,340	1,150	2,380	6,820	2,260	2,620	13,800	2,010	1,470	1,540	1,840
16	1,020	4,070	1,200	2,310	4,310	2,300	2,550	13,000	1,960	1,340	1,200	1,400
17	1,240	2,970	1,870	2,240	3,890	2,900	2,440	19,400	2,690	1,210	1,090	1,180
18	1,040	2,860	2,440	1,660	3,450	2,740	2,460	14,400	2,510	1,300	1,210	1,250
19	772	2,610	2,040	1,630	3,210	2,590	1,980	5,370	2,150	1,070	1,690	1,460
20	652	2,240	1,720	1,890	3,040	2,770	1,790	4,070	2,080	987	1,660	1,430
21	785	2,400	1,610	1,780	2,930	3,070	2,030	3,660	2,200	1,350	1,340	1,370
22	1,160	2,370	3,010	1,820	2,360	2,380	2,110	3,360	1,600	1,290	1,280	1,590
23	1,620	1,740	4,040	2,060	5,980	2,130	2,260	3,080	2,070	1,140	2,000	2,100
24	1,320	1,550	3,290	2,220	14,800	2,130	2,240	2,300	2,290	1,030	2,080	2,060
25	1,070	2,110	2,890	1,990	7,240	2,020	2,250	2,140	2,330	1,130	1,770	1,560
26	892	2,050	2,590	2,190	4,610	2,080	1,940	2,650	1,900	1,250	1,290	1,500
27	745	2,050	1,910	2,200	4,060	2,130	1,650	2,670	1,900	1,060	2,400	1,220
28	792	1,370	1,770	1,860	3,850	2,460	1,850	2,770	1,580	1,270	2,700	1,100
29	853	2,060	1,590	1,590	------	2,780	2,310	5,660	1,350	1,370	2,470	1,080
30	985	1,300	1,520	1,630	------	2,970	2,630	10,600	1,820	3,090	1,370	1,150
31	5,500	------	1,730	1,970	------	2,840	------	6,980	------	3,660	957	------
TOTAL	30,545	106,180	56,730	84,430	149,590	112,100	86,140	164,690	70,470	52,267	54,327	44,568
MEAN	985	3,539	1,830	2,724	5,343	3,616	2,871	5,313	2,349	1,686	1,752	1,486
MAX	5,500	16,300	4,040	12,600	17,000	13,400	8,370	19,400	4,330	3,660	2,810	3,950
MIN	459	1,300	1,100	1,580	1,360	2,020	1,650	1,640	1,350	987	957	833
(*)	+172	-115	-35	-11	+165	-39	-6	+46	-55	-6	-55	-18
MEAN‡	1,157	3,424	1,795	2,713	5,508	3,577	2,865	5,359	2,294	1,680	1,697	1,468
CFSM‡	.45	1.34	.70	1.06	2.16	1.40	1.12	2.10	.90	.66	.67	.58
IN.‡	.52	1.50	.81	1.22	2.25	1.61	1.25	2.42	1.00	.76	.77	.65

CAL YR 1970 TOTAL 869,535 MEAN 2,382 MAX 23,600 MIN 459 MEAN‡ 2,378 CFSM‡ .93 IN.‡ 12.66
WTR YR 1971 TOTAL 1,012,037 MEAN 2,773 MAX 19,400 MIN 459 MEAN‡ 2,776 CFSM‡ 1.09 IN.‡ 14.78

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN PHILPOTT LAKE; FURNISHED BY CORPS OF ENGINEERS.
‡ ADJUSTED FOR CHANGE IN CONTENTS.

02076500 GEORGES CREEK NEAR GRETNA VA.

LOCATION (revised).--Lat 36°56'11", long 79°18'42", Pittsylvania County, on left bank 15 ft downstream from bridge on State Highway 40, 2.8 miles southeast of Gretna, and 5.8 miles upstream from Whitethorn Creek.

DRAINAGE AREA.--9.24 sq mi.

PERIOD OF RECORD.--September 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 629.54 ft above mean sea level.

AVERAGE DISCHARGE.--22 years, 8.64 cfs (12.70 inches per year).

EXTREMES.--Current year: Maximum discharge, 419 cfs May 16 (gage height, 4.32 ft, from recorded range in stage) from rating curve extended as explained below; minimum daily, 2.2 cfs Oct. 7, 8, 14.
Period of record: Maximum discharge, 1,440 cfs Aug. 24, 1967 (gage height, 7.66 ft), from rating curve extended above 220 cfs on basis of slope-area measurements at gage heights 4.93 and 6.22 ft; minimum daily, 1.0 cfs Mar. 12, Apr. 5, 1956, July 28, 1966.

REMARKS.--Records fair except those for period of no gage-height record, which are poor. Occasional regulation at low flow from unknown source. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS (WATER YEARS).--WSP 1703: 1950-52. WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	10	5.2	4.4	9.0	13	7.2	6.6	11	11	8.1	5.9
2	2.6	7.9	5.1	4.3	8.0	13	7.7	6.6	9.9	9.3	8.1	6.0
3	2.6	9.0	5.0	4.6	7.0	18	8.6	6.6	9.0	7.7	6.8	6.0
4	2.3	15	5.4	5.7	8.0	20	10	6.4	8.6	6.8	7.5	6.0
5	2.3	11	5.2	36	13	15	10	6.4	8.1	6.5	7.7	6.0
6	2.3	7.5	5.5	18	17	13	14	7.0	7.9	8.3	7.2	5.8
7	2.2	6.6	5.4	13	30	12	25	11	7.5	8.1	6.8	5.7
8	2.2	6.4	5.2	12	39	11	19	13	7.2	7.0	6.5	5.7
9	2.3	6.3	5.4	12	24	10	12	9.3	7.5	6.8	6.2	5.7
10	2.4	6.6	5.4	12	14	10	11	8.0	6.8	7.0	6.2	5.7
11	2.4	17	5.4	11	13	9.9	10	7.5	6.7	7.2	9.8	7.8
12	2.5	10	5.4	11	13	9.6	9.0	7.3	7.5	7.0	10	11
13	2.4	11	5.5	10	36	9.3	8.5	70	7.7	6.5	7.2	7.7
14	2.2	9.7	5.2	10	24	9.3	8.0	35	6.7	6.4	6.7	6.0
15	2.5	19	5.0	10	18	11	7.6	17	6.7	6.2	6.4	5.2
16	2.6	8.6	6.6	9.9	16	11	7.4	80	25	6.2	6.1	5.1
17	2.6	6.8	8.2	9.9	16	9.0	7.2	60	11	6.1	6.0	5.1
18	2.6	6.3	5.9	9.9	14	8.8	7.0	45	9.6	6.0	17	5.2
19	2.6	6.1	5.4	9.6	14	9.9	7.0	30	8.6	6.2	9.3	5.4
20	2.6	6.3	5.2	8.6	14	10	7.0	20	8.1	6.2	7.5	5.8
21	7.4	6.1	8.2	8.1	13	8.8	7.0	14	7.7	6.0	6.4	5.2
22	4.2	5.7	8.6	8.1	22	8.8	7.4	12	7.2	6.0	6.2	5.3
23	3.3	5.4	6.8	9.9	32	8.6	7.2	11	7.2	5.8	6.2	5.3
24	3.0	5.4	6.3	9.3	18	8.1	7.8	10	6.8	5.8	5.7	5.3
25	3.1	5.2	5.7	9.6	15	7.9	7.4	9.0	7.7	6.5	5.5	5.1
26	3.2	5.4	5.5	9.9	14	9.0	6.8	8.3	7.9	6.4	5.5	5.2
27	3.1	5.4	5.4	12	14	10	6.6	7.9	6.8	5.7	8.3	5.1
28	3.2	5.5	5.4	9.9	14	12	7.5	13	6.4	5.7	7.0	5.1
29	3.2	5.4	5.4	10	------	10	8.4	18	12	6.5	6.1	5.0
30	20	5.2	4.9	11	------	9.0	7.0	26	14	8.1	5.8	5.1
31	26	------	4.6	11	------	7.5	------	14	------	7.7	6.0	------
TOTAL	128.5	241.8	177.4	330.7	489.0	332.5	276.3	595.9	264.8	212.7	225.8	174.5
MEAN	4.15	8.06	5.72	10.7	17.5	10.7	9.21	19.2	8.83	6.86	7.28	5.82
MAX	26	19	8.6	36	39	20	25	80	25	11	17	11
MIN	2.2	5.2	4.6	4.3	7.0	7.5	6.6	6.4	6.4	5.7	5.5	5.0
CFSM	.45	.87	.62	1.16	1.89	1.16	1.00	2.08	.96	.74	.79	.63
IN.	.52	.97	.71	1.33	1.97	1.34	1.11	2.40	1.07	.86	.91	.70

CAL YR 1970 TOTAL 2,093.0 MEAN 5.73 MAX 28 MIN 1.5 CFSM .62 IN 8.43
WTR YR 1971 TOTAL 3,449.5 MEAN 9.45 MAX 80 MIN 2.2 CFSM 1.02 IN 13.89

PEAK DISCHARGE (BASE, 150 CFS).--MAY 16 (UNKNOWN) 419 CFS (4.32 FT).

NOTE.--NO GAGE-HEIGHT RECORD APR. 4 TO MAY 6.

02077000 BANISTER RIVER AT HALIFAX, VA.

LOCATION.--Lat 36°46'35", long 78°54'58", Halifax County, on left bank 10 ft downstream from bridge on U.S. Highway 360, 1,700 ft downstream from Terrible Creek, 1 mile northeast of Halifax, and 10 miles upstream from mouth.

DRAINAGE AREA.--547 sq mi.

PERIOD OF RECORD.--September 1904 to December 1905, October 1928 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Datum of gage is 318.54 ft above mean sea level (levels by Corps of Engineers). Sept. 28, 1904, to Dec. 31, 1905, nonrecording gage at site 400 ft upstream at different datum. Dec. 9, 1928, to Sept. 20, 1950, water-stage recorder at site 400 ft upstream at present datum.

AVERAGE DISCHARGE.--44 years (1904-5, 1928-71), 485 cfs (12.04 inches per year).

EXTREMES.--Current year: Maximum discharge, 10,800 cfs Sept. 12 (gage height, 24.07 ft); minimum daily, 41 cfs Oct. 7, 8.

Period of record: Maximum discharge, 50,000 cfs Sept. 20, 1944 (gage height, 40.8 ft, from floodmarks), from rating curve extended above 11,000 cfs on basis of slope-area measurement of peak flow and velocity-area study; minimum, 6.0 cfs on many days in August and September 1932; minimum daily, 6.0 cfs Aug. 30, 1932.

REMARKS.--Records good. Low and medium flow regulated by a lake 0.5 mile above station at times during year. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 892: 1929-30, 1932-35. WSP 972: 1938(M), 1940. WSP 1112: 1943(M). WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TC SEPTEMBER 1971

DAY	OCT	NOV	CEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	546	177	184	220	443	295	228	1,460	1,080	223	168
2	49	327	175	195	149	394	295	214	784	751	199	157
3	47	221	172	247	164	658	397	213	513	460	203	151
4	49	215	174	281	217	1,700	443	204	410	255	188	147
5	46	327	161	838	263	1,740	355	198	338	235	189	145
6	43	361	163	1,830	469	1,020	528	198	278	213	184	141
7	41	248	153	1,580	1,010	711	1,390	239	290	225	175	138
8	41	193	151	873	2,370	568	1,860	322	280	223	158	132
9	43	169	154	551	3,450	466	1,190	332	275	198	143	127
10	44	163	158	448	2,440	407	740	251	276	195	133	144
11	45	337	156	393	1,270	383	555	214	244	198	129	498
12	46	625	154	349	754	355	457	203	228	190	160	8,100
13	46	628	156	312	800	328	405	890	227	194	188	4,400
14	46	529	152	295	1,730	326	369	6,620	238	187	160	1,340
15	45	935	147	297	1,530	320	326	6,000	224	171	135	484
16	52	965	165	271	971	358	298	3,160	348	159	122	286
17	60	582	245	166	657	394	284	6,150	569	152	116	242
18	53	275	311	237	529	331	280	3,920	342	144	281	227
19	50	255	244	233	454	313	272	1,290	281	140	680	228
20	52	251	202	183	407	358	162	750	250	140	433	223
21	54	247	247	170	350	393	244	583	250	138	260	231
22	135	244	800	237	391	342	248	522	225	135	195	225
23	179	225	895	258	656	315	247	348	216	127	188	238
24	134	202	613	266	1,110	205	274	326	225	124	167	228
25	107	187	429	281	872	230	274	327	217	129	150	207
26	96	184	231	309	601	280	246	313	200	143	138	192
27	91	183	261	254	520	310	223	288	194	150	1,800	183
28	87	183	227	178	518	396	241	333	184	138	1,520	178
29	87	180	200	161	------	459	283	962	235	139	313	173
30	126	180	176	251	------	391	268	1,980	1,270	219	223	174
31	341	------	198	266	------	331	------	2,390	------	304	185	------
TOTAL	2,387	10,167	7,847	12,394	24,952	15,225	13,449	39,968	11,071	7,256	9,338	19,507
MEAN	77.0	339	253	400	891	491	448	1,289	369	234	301	650
MAX	341	965	895	1,830	3,450	1,740	1,860	6,620	1,460	1,080	1,800	8,100
MIN	41	163	147	161	149	205	162	198	184	124	116	127
CFSM	.14	.62	.46	.73	1.63	.90	.82	2.36	.67	.43	.55	1.19
IN.	.16	.69	.53	.84	1.70	1.04	.91	2.72	.75	.49	.64	1.33

CAL YR 1970 TCTAL 96,237 MEAN 264 MAX 1,640 MIN 41 CFSM .48 IN 6.54
WTR YR 1971 TOTAL 173,561 MEAN 476 MAX 8,100 MIN 41 CFSM .87 IN 11.80

02077500 HYCO RIVER NEAR DENNISTON, VA.

LOCATION.--Lat 36°35'16", long 78°53'56", Halifax County, on left bank 10 ft upstream from bridge on U.S. Highway 501, 0.8 mile upstream from Mayo Creek, 2.5 miles northeast of Denniston, and 7.3 miles south of South Boston.

DRAINAGE AREA.--289 sq mi.

PERIOD OF RECORD.--October 1928 to September 1934, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1303.

GAGE.--Water-stage recorder. Datum of gage is 315.24 ft above mean sea level. July 10, 1929, to Mar. 14, 1934, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--27 years, 236 cfs (11.09 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 3,980 cfs Feb. 9 (gage height, 16.98 ft), from rating curve extended above 2,900 cfs; minimum, 6.5 cfs Oct. 6 (gage height, 4.14 ft).

Period of record: Maximum discharge, 7,630 cfs Oct. 3, 1929 (gage height, 21.88 ft, from graph based on gage readings), from rating curve extended above 2,900 cfs; minimum, 0.004 cfs Sept. 14, 1932 (gage height, 3.58 ft), result of discharge measurement.

Floods in August 1928 and September 1945 reached stages of 26.4 and 25.6 ft, respectively, from floodmarks.

REMARKS.--Records good. Small diurnal fluctuation at low flow caused by mill above station in some years. Since 1964, flow regulated by Hyco Lake (formerly published as Roxboro Steam-electric Generating Plant Lake), 15.7 miles upstream, capacity 3,288,000,000 cu ft. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1383: Drainage area, 1930. WSP 1503: 1930(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	42	65	143	139	334	294	92	890	32	21	202
2	10	29	66	170	126	322	242	87	426	37	18	136
3	11	27	65	173	107	966	310	142	288	32	15	101
4	10	28	66	253	125	2,080	281	104	208	29	16	81
5	8.1	28	65	736	289	2,610	236	86	159	26	34	68
6	7.3	24	64	682	840	1,870	850	82	127	26	31	59
7	9.4	22	62	495	968	819	1,640	74	105	28	40	56
8	11	21	62	353	2,050	505	1,490	86	90	27	49	49
9	12	22	64	287	3,730	356	938	92	88	26	46	45
10	14	22	64	266	3,730	281	535	77	70	27	46	40
11	15	280	64	258	2,450	260	365	69	65	33	28	90
12	16	186	64	260	1,030	225	288	69	66	27	23	823
13	17	144	62	239	737	201	243	517	77	28	22	734
14	23	117	61	219	1,240	178	210	828	65	27	20	215
15	33	962	62	199	1,070	171	166	538	62	24	20	119
16	43	727	70	171	644	168	148	1,510	66	24	20	80
17	37	498	191	151	461	145	134	2,620	73	21	17	64
18	31	307	116	131	360	119	119	2,460	66	18	35	65
19	29	213	89	119	293	116	105	1,400	63	17	67	85
20	29	169	80	107	268	162	100	490	61	17	54	65
21	40	146	157	97	232	135	95	319	57	15	40	59
22	60	110	317	97	320	110	98	244	57	14	39	117
23	34	97	186	103	973	103	89	186	57	14	83	190
24	30	79	263	115	732	91	98	155	46	13	53	100
25	31	71	218	192	501	84	94	141	42	17	49	71
26	30	69	194	220	373	91	84	114	41	22	48	57
27	31	69	159	211	484	135	79	94	39	19	799	51
28	34	68	127	148	437	207	98	136	37	24	1,990	45
29	32	65	108	125	------	450	130	1,270	38	23	1,400	43
30	39	65	96	141	------	506	103	2,210	35	20	779	39
31	77	------	92	143	------	374	------	1,860	------	18	342	------
TOTAL	814.8	4,707	3,419	7,004	24,749	14,174	9,666	18,152	3,564	725	6,244	3,909
MEAN	26.3	157	110	226	884	457	322	586	119	23.4	201	130
MAX	77	962	317	736	3,730	2,610	1,640	2,620	890	37	1,990	823
MIN	7.3	21	61	97	107	84	79	69	35	13	15	39
(*)	-13	+64	+12	-1	+8	0	-10	+21	-42	-24	+51	-17

CAL YR 1970 TOTAL 49,683.8 MEAN 136 MAX 2,080 MIN 7.3 MEAN♦ 137 CFSM♦ .47 IN.♦ 6.44
WTR YR 1971 TOTAL 97,127.8 MEAN 266 MAX 3,730 MIN 7.3 MEAN♦ 270 CFSM♦ .93 IN.♦ 12.69

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN HYCO LAKE.
♦ ADJUSTED FOR CHANGE IN CONTENTS.

02079640 ALLEN CREEK NEAR BOYDTON, VA.

LOCATION.--Lat 36°40'46", long 78°19'37", Mecklenburg County, on left bank at upstream side of bridge on U.S. Highway 58, 0.8 mile upstream from Coleman Creek, 2.3 miles downstream from Layton Creek, 3.7 miles east of Boydton, and 11.8 miles southwest of South Hill.

DRAINAGE AREA.--53.4 sq mi.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 257.34 ft above mean sea level (levels by Virginia Department of Highways).

AVERAGE DISCHARGE.--10 years, 31.0 cfs (7.88 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,250 cfs May 30 (gage height, 17.04 ft); no flow many days in October.

Period of record: Maximum discharge, 4,580 cfs Jan. 7, 1962 (gage height, 20.56 ft, from recorded range in stage); no flow many days in August, September, and October 1968, September and October 1970.

REMARKS.--Records good.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

REVISIONS.--WRD Va. 1970: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	5.6	2.8	14	12	38	39	9.5	75	13	40	2.3
2	0	2.0	2.6	27	11	33	35	9.2	44	9.2	8.1	2.0
3	0	1.0	2.5	25	8.2	276	39	15	31	44	4.6	1.8
4	0	.58	2.4	21	12	270	36	20	22	13	5.8	1.4
5	0	.40	2.3	94	56	100	31	12	17	7.2	180	1.1
6	0	.32	2.3	79	198	60	420	9.8	15	5.6	24	1.1
7	0	.32	2.3	35	444	50	268	9.2	13	12	11	1.1
8	0	.38	2.3	22	1,030	42	37	16	11	8.4	7.6	1.4
9	0	.40	2.3	19	300	38	53	20	11	5.4	5.8	.90
10	0	.60	2.4	20	116	34	41	11	9.7	4.2	5.0	.60
11	0	33	2.5	27	82	32	33	8.0	8.9	3.7	4.5	14
12	0	18	2.6	32	69	30	30	7.3	8.7	3.2	12	18
13	0	82	2.7	24	253	29	28	39	12	2.7	7.2	24
14	0	23	2.7	20	178	28	24	40	10	2.5	3.6	7.2
15	0	85	2.7	19	67	28	20	25	8.7	2.2	2.2	4.2
16	0	35	3.2	16	51	35	19	1,090	14	1.8	1.5	3.0
17	0	12	23	13	42	28	18	144	15	1.6	1.2	2.4
18	0	7.5	13	12	38	27	17	70	11	1.4	2.5	2.0
19	0	5.8	7.0	11	34	26	15	49	9.4	1.1	6.0	2.2
20	0	5.2	5.8	9.0	32	26	14	38	8.6	1.1	3.6	2.1
21	0	4.6	12	8.8	29	30	14	32	7.4	1.0	1.7	1.6
22	0	4.3	95	8.8	29	35	14	29	6.9	.84	1.4	1.9
23	0	3.9	37	12	70	30	12	25	6.9	.66	8.6	6.3
24	0	3.4	50	18	43	25	16	22	35	.60	2.5	4.1
25	0	2.9	27	38	32	23	13	22	11	.66	1.3	2.6
26	0	2.8	15	34	28	22	11	21	8.0	1.4	.78	1.2
27	0	2.8	11	24	92	23	11	19	6.4	1.2	34	.66
28	0	2.8	8.0	18	55	35	13	25	5.3	8.8	15	.48
29	0	2.8	6.8	14	------	100	14	507	4.6	5.4	7.2	.40
30	.50	2.9	6.0	14	------	82	11	1,580	4.8	2.8	4.4	.52
31	5.6	------	6.0	15	------	49	------	164	------	3.1	3.0	------
TOTAL	6.10	351.30	363.2	753.6	3,411.2	1,684	1,396	4,088.0	451.3	169.76	416.08	112.56
MEAN	.20	11.7	11.7	24.3	122	54.3	46.5	132	15.0	5.48	13.4	3.75
MAX	5.6	85	95	94	1,030	276	420	1,580	75	44	180	24
MIN	0	.32	2.3	8.8	8.2	22	11	7.3	4.6	.60	.78	.40
CFSM	.004	.22	.22	.46	2.28	1.02	.87	2.47	.28	.10	.25	.07
IN.	.004	.24	.25	.52	2.38	1.17	.97	2.85	.31	.12	.29	.08

CAL YR 1970 TOTAL 7,167.13 MEAN 19.6 MAX 344 MIN 0 CFSM .37 IN 4.99
WTR YR 1971 TOTAL 13,203.10 MEAN 36.2 MAX 1,580 MIN 0 CFSM .68 IN 9.20

PEAK DISCHARGE (BASE, 850 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 8	0400	16.17	1,910	5-30	1000	17.04	2,250
5-16	1300	16.30	1,950				

RESERVOIRS IN ROANOKE RIVER BASIN, VA.

02057400 SMITH MOUNTAIN LAKE.--Lat 37°02'28", long 79°32'09", Pittsylvania County, at dam on Roanoke (Staunton) River 6.5 miles northeast of Penhook, and at mile 314.0. Drainage area, 1,024 sq mi. Period of record, September 1963 to current year. Gage, water-stage recorder. Datum of gage is mean sea level. Prior to July 19, 1965, nonrecording gage at same site and datum. Extremes for current year: Maximum contents, 1,146,500 acre-ft May 16 (elevation, 795.2 ft); minimum, 1,034,400 acre-ft Feb. 4 (elevation, 789.7 ft). Extremes for period of record: Maximum contents, 1,146,500 acre-ft May 16, 1971 (elevation, 795.2 ft); minimum (after first filling to minimum power pool), 995,400 acre-ft Jan. 21, 1970 (elevation, 787.6 ft).

Reservoir is formed by concrete dam. Two ungated spillways, one near each end of dam, with crests at elevation 795 ft are each 105 ft long. Initial filling began in September 1963 during construction; water in reservoir first reached minimum power pool (elevation, 787 ft) in May 1965. Total capacity at elevation 811 ft (maximum pool elevation) is 1,517,000 acre-ft, of which 375,000 acre-ft is above the spillway crest; 157,800 acre-ft is normally used for power between elevation 787 ft (minimum power pool) and the spillway crest. Capacity at invert of lowest penstock (elevation, 601 ft) is 100 acre-ft. Figures given herein represent total contents. Reservoir is part of the Smith Mountain Combination Project (pumped storage) which is used for hydroelectric power, flood-control, low-water regulation for pollution abatement and water supply, and recreation. Records of water-surface elevations furnished by Appalachian Power Company. Change in contents based on volume table furnished by the power company.

02059400 LEESVILLE LAKE.--Lat 37°05'35", long 79°24'09", Campbell County, at Leesville Dam on Roanoke (Staunton) River, 2.0 miles south of Leesville, 3.5 miles upstream from Goose Creek, and at mile 296. Drainage area, 1,505 sq mi. Period of record, September 1962 to current year. Gage, water-stage recorder. Datum of gage is mean sea level. Prior to June 6, 1963, nonrecording gage at same site and datum. Extremes for current year: Maximum contents, 95,930 acre-ft June 11 (elevation, 613.3 ft); minimum, 56,970 acre-ft Apr. 12 (elevation, 599.9 ft). Extremes for period of record: Maximum contents, 98,180 acre-ft Feb. 1, 1965 (elevation, 614.0 ft); minimum (after first filling to minimum power pool), 39,880 acre-ft Mar. 19, 1963 (elevation, 592.0 ft).

Reservoir is formed by concrete dam. Spillway, with crest at elevation 578.0 ft, is equipped with 4 radial gates 35 ft high by 50 ft wide. Storage began on Sept. 29, 1962, during construction, and water in reservoir first reached minimum power pool (elevation, 600.0 ft) on Mar. 5, 1963. Total capacity at elevation 613 ft (maximum pool elevation) is 94,960 acre-ft, of which 75,960 acre-ft is above the spillway crest; 38,200 acre-ft is normally used for power between elevations 600.0 ft (minimum power pool) and the spillway crest. Capacity at invert of lowest penstock (elevation, 579.75 ft) is 21,010 acre-ft. Figures given herein represent total contents. Reservoir is part of the Smith Mountain Combination Project (see Smith Mountain Lake above). Records of water-surface elevations furnished by Appalachian Power Company. Change in contents based on volume table furnished by the power company.

02067800; 02067820 TALBOTT AND TOWNES RESERVOIRS.--On Dan River. The two reservoirs are operated as a unit for storage of water for Pinnacles hydroelectric plant. Talbott Dam (drainage area, 20.2 sq mi) is at lat 36°40'39", long 80°23'52", Patrick County, and 4.5 miles northeast of Kibler. Townes Dam (drainage area, 32.9 sq mi) is at lat 36°41'10", long 80°25'50", Patrick County, and about 4 miles north of Kibler. Period of record, February 1939 to December 1945, and January 1948 to September 1960, published in WSP 1723, and October 1960 to current year; records published are combined monthend contents of the two reservoirs.

Total capacity of Talbott Reservoir, 8,035 acre-ft, and Townes Reservoir, 1,377 acre-ft. Storage was started in Talbott Reservoir on Feb. 13, 1939, and in Townes Reservoir several months earlier. Records furnished by city of Danville.

02071900 PHILPOTT LAKE (formerly published as "Philpott Reservoir").--Lat 36°46'52", long 80°01'40", Henry County, at Philpott Dam on Smith River, 1.5 miles west of Philpott, 12.0 miles upstream from Reed Creek, and at mile 44.3. Drainage area, 216 sq mi. Period of record, August 1950 to current year. Gage, water-stage recorder. Datum of gage is mean sea level. Extremes for current year: Maximum contents, 170,920 acre-ft May 17 (elevation, 976.40 ft); minimum, 154,720 acre-ft Oct. 20 (elevation, 970.75 ft). Extremes for period of record: Maximum contents, 170,920 acre-ft May 17, 1971 (elevation, 976.40 ft); minimum (after first filling to rule curve), 64,540 acre-ft Sept. 26, 1956 (elevation, 927.59 ft).

Reservoir is formed by concrete dam. Spillway, with crest at elevation 985 ft, is ungated and 120 ft long. Storage began in August 1950 during construction; initial filling started in December 1951; water in reservoir first reached rule-curve elevation in July 1953. Total capacity at elevation 998 ft (maximum flood-control pool) is 246,400 acre-ft, of which 48,300 acre-ft is above the spillway crest, 34,100 acre-ft is controlled flood storage between elevations 974 (maximum power pool) and 985 ft, 110,000 acre-ft is available for power between elevations 920 (minimum power pool) and 974 ft, and 54,000 acre-ft is dead storage below elevation 920 ft. Usable capacity is 144,100 acre-ft between elevations 920 and 985 ft. Figures given herein represent total contents. Reservoir is used for flood control, hydroelectric power, low-water regulation for pollution abatement and industrial water supply, and recreation. Records furnished by Corps of Engineers.

02079490 JOHN H. KERR RESERVOIR.--Lat 36°35'56", long 78°19'06", Mecklenburg County, at John H. Kerr Dam on Roanoke River, 2.7 miles upstream from Allen Creek, 6.7 miles southeast of Boydton, 18 miles upstream from the Virginia-North Carolina State line, and at mile 178.7. Drainage area, 7,780 sq mi, approximately. Period of record, July 1950 to current year. Gage, water-stage recorder. Datum of gage is mean sea level. Extremes for current year: Maximum contents, 1,921,200 acre-ft May 19 (elevation, 308.28 ft); minimum, 1,150,500 acre-ft Oct. 14 (elevation, 292.80 ft). Extremes for period of record: Maximum contents, 1,965,700 acre-ft May 10, 1958 (elevation, 309.02 ft); minimum (after first filling to rule curve), 724,700 acre-ft Feb. 3, 1956 (elevation, 280.23 ft).

Reservoir is formed by concrete dam with earth embankments. Spillway, with crest at elevation 288.0 ft, is equipped with 22 radial gates 32 ft high by 42 ft wide. Storage began in September 1950 during construction; initial filling started June 30, 1952; water in reservoir first reached rule-curve elevation in March 1953. Total capacity at elevation 320 ft (top of gates) is 2,750,300 acre-ft, of which 1,278,000 acre-ft is controlled flood storage between elevations 300 (top of power pool) and 320 ft, 745,700 acre-ft between elevation 280.3 (bottom of power pool) and 300 ft is available for power, and 726,600 acre-ft below elevation 280.3 ft is dead storage. Figures given herein represent total contents. Reservoir is used for flood control, hydroelectric power, low-water regulation for navigation and pollution abatement, and recreation. Records furnished by Corps of Engineers.

RESERVOIRS IN ROANOKE RIVER BASIN, VA.--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
	02057400 Smith Mountain Lake			02059400 Leesville Lake		
Sept. 30	793.3	1,107,300	-	605.9	73,250	-
Oct. 31	793.3	1,107,300	0	610.6	87,230	+13,980
Nov. 30	794.0	1,121,600	+14,300	606.0	73,540	-13,690
Dec. 31	793.0	1.101,200	-20,400	611.8	91,100	+17,560
CAL YR 1970	-	-	-4,100	-	-	+2,580
Jan. 31	792.0	1,080,800	-20,400	602.4	63,630	-27,470
Feb. 28	794.5	1,131,800	+51,000	601.2	60,420	-3,210
Mar. 31	792.8	1,097,100	-34,700	606.0	73,540	+13,120
Apr. 30	794.3	1,127,700	+30,600	608.1	79,710	+6,170
May 31	794.8	1,137,900	+10,200	604.9	70,330	-9,380
June 30	792.0	1,080,800	-57,100	611.8	91,100	+20,770
July 31	792.9	1,099,200	+18,400	606.0	73,540	-17,560
Aug. 31	792.5	1,091,000	-8,200	609.9	85,010	+11,470
Sept. 30	792.5	1,091,000	0	610.8	87,880	+2,870
WTR YR 1971	-	-	-16,300	-	-	+14,630
	02067800; 02067820 Talbott and Townes Reservoirs *			02071900 Philpott Lake		
Sept. 30	-	7,900	-	971.70	157,360	-
Oct. 31	-	9,200	+1,300	975.38	167,940	+10,580
Nov. 30	-	8,100	-1,100	973.04	161,120	-6,820
Dec. 31	-	8,000	-100	972.28	158,980	-2,140
CAL YR 1970	-	-	-400	-	-	-3,100
Jan. 31	-	7,900	-100	972.03	158,280	-700
Feb. 28	-	8,700	+800	975.22	167,460	+9,180
Mar. 31	-	8,200	-500	974.39	165,090	-2,370
Apr. 30	-	8,100	-100	974.27	164,760	-330
May 31	-	8,400	+300	975.26	167,580	+2,820
June 30	-	8,100	-300	974.10	164,280	-3,300
July 31	-	8,200	+100	973.97	163,910	-370
Aug. 31	-	8,000	-200	972.83	160,520	-3,390
Sept. 30	-	8,200	+200	972.44	159,430	-1,090
WTR YR 1971	-	-	+300	-	-	+2,070
	02079490 John H. Kerr Reservoir					
Sept. 30	294.20	1,208,500	-			
Oct. 31	293.72	1,188,400	-20,100			
Nov. 30	296.82	1,322,900	+134,500			
Dec. 31	293.87	1,194,600	-128,300			
CAL YR 1970	-	-	+162,100			
Jan. 31	295.18	1,250,400	+55,800			
Feb. 28	302.57	1,602,200	+351,800			
Mar. 31	300.49	1,496,600	-105,600			
Apr. 30	302.38	1,592,300	+95,700			
May 31	306.87	1,838,300	+246,000			
June 30	300.02	1,473,300	-365,000			
July 31	301.06	1,524,800	+51,500			
Aug. 31	300.87	1,515,400	-9,400			
Sept. 30	298.35	1,393,300	-122,100			
WTR YR 1971	-	-	+184,800			

* Combined contents.

KANAWHA RIVER BASIN

03161000 SOUTH FORK NEW RIVER NEAR JEFFERSON, N. C.

LOCATION.--Lat 36°23'40", long 81°24'27", Ashe County, on right bank 600 ft upstream from bridge on State Highways 16 and 88, 0.2 mile downstream from Bear Creek, and 4 miles southeast of Jefferson.

DRAINAGE AREA.--207 sq mi.

PERIOD OF RECORD.--October 1924 to current year. Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 2,657.04 ft above mean sea level, unadjusted. Prior to Oct. 14 1934, nonrecording gage on bridge 400 ft downstream at same datum. Oct. 14, 1934, to Mar. 25, 1935, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--47 years, 410 cfs (26.90 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,480 cfs Oct. 30 (gage height, 5.21 ft); minimum, 99 cfs Jan. 20 (gage height, 1.56 ft), result of freezeup; minimum daily, 177 cfs Jan. 20.

Period of record: Maximum discharge, 52,800 cfs Aug. 14, 1940 (gage height, 22.50 ft), from rating curve extended above 5,100 cfs on basis of slope-area measurement of peak flow; minimum, 52 cfs Dec. 24, 1943, result of freezeup; minimum daily, 65 cfs Sept. 9, 1925.

Flood of July 15, 1961, reached a stage of 18.0 ft, from floodmarks (discharge, 35,200 cfs), witnessed by local resident.

REMARKS.--Records good except those for winter periods, which are fair. Slight diurnal fluctuation at low flow in the growing season. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1275: 1925-26(M), 1928-30(M), 1931-32, 1933-35(M), 1941-42(m), 1944(m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202	1,440	322	260	240	489	400	351	394	292	935	265
2	205	1,050	315	260	290	510	390	333	361	325	799	331
3	199	1,060	308	300	290	738	382	333	353	426	784	364
4	190	803	304	340	280	905	360	321	390	314	608	296
5	182	680	290	586	780	696	353	305	335	279	663	281
6	181	608	291	506	850	623	417	309	316	275	612	273
7	185	545	278	397	520	591	534	399	316	365	684	268
8	187	497	272	353	460	559	429	445	376	472	572	308
9	230	457	291	333	400	493	392	402	328	361	511	293
10	319	549	292	325	400	521	376	342	301	421	514	261
11	342	1,010	286	315	400	502	358	321	300	521	512	314
12	300	693	285	311	400	502	351	333	334	453	481	380
13	270	588	288	302	1,080	486	344	958	312	421	413	306
14	232	521	274	307	1,130	497	336	827	348	349	376	277
15	232	507	266	355	736	497	326	635	404	319	351	262
16	217	468	287	313	613	546	324	817	375	300	336	249
17	202	425	350	290	565	486	320	676	310	282	332	252
18	198	407	346	289	528	460	314	563	301	268	341	334
19	196	395	301	247	522	475	306	497	312	282	344	535
20	205	421	293	177	544	513	303	472	552	352	317	449
21	707	472	317	260	569	454	304	837	461	310	300	549
22	613	398	342	300	651	430	339	552	520	276	303	844
23	338	381	358	480	1,030	430	328	467	691	267	399	524
24	278	349	529	584	747	400	388	431	686	260	379	409
25	257	312	404	560	630	391	329	417	414	282	309	359
26	246	360	360	491	579	410	301	404	354	417	299	346
27	237	360	330	380	614	409	290	362	330	516	378	342
28	232	364	320	240	535	459	493	396	309	361	303	364
29	275	339	320	300	------	473	529	610	291	937	278	359
30	1,750	335	310	320	------	501	384	545	296	1,300	271	322
31	2,060	------	300	300	------	425	------	452	------	1,300	268	------
TOTAL	11,467	16,794	9,829	10,781	16,363	15,871	11,000	15,112	11,370	13,303	13,972	10,716
MEAN	370	560	317	348	584	512	367	487	379	429	451	357
MAX	2,060	1,440	529	586	1,130	905	534	958	691	1,300	935	844
MIN	181	312	266	177	240	391	290	305	291	260	268	249
CFSM	1.79	2.71	1.53	1.68	2.82	2.47	1.77	2.35	1.83	2.07	2.18	1.72
IN.	2.06	3.02	1.77	1.94	2.94	2.85	1.98	2.72	2.04	2.39	2.51	1.93

CAL YR 1970 TOTAL 155,261 MEAN 425 MAX 5,550 MIN 149 CFSM 2.05 IN 27.90
WTR YR 1971 TOTAL 156,578 MEAN 429 MAX 2,060 MIN 177 CFSM 2.07 IN 28.14

PEAK DISCHARGE (BASE, 2,600 CFS).--NO PEAK ABOVE BASE.

03164000 NEW RIVER NEAR GALAX, VA.

LOCATION.--Lat 36°38'50", long 80°58'45", Grayson County, on left bank at upstream side of bridge on U.S. Highway 58, 500 ft downstream from Meadow Creek, 1.2 miles southwest of Old Town, 3.1 miles southwest of Galax, and 3.6 miles downstream from Elk Creek.

DRAINAGE AREA.--1,131 sq mi.

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 2,208.04 ft above mean sea level.

AVERAGE DISCHARGE.--42 years, 1,809 cfs (21.72 inches per year).

EXTREMES.--Current year: Maximum discharge, 8,340 cfs Oct. 31 (gage height, 3.81 ft); maximum gage height, 6.64 ft Feb. 5 (backwater from ice); minimum discharge, 519 cfs Oct. 6, 7 (gage height, 0.89 ft).
Period of record: Maximum discharge, 141,000 cfs Aug. 14, 1940 (gage height, 25.7 ft, from floodmark), from rating curve extended above 32,000 cfs on basis of computation of peak flow over dam at Fries 6 miles downstream, and slope-area measurement of peak flow; minimum, 193 cfs Jan. 9, 1956 (gage height, 0.52 ft), result of freezeup; minimum daily, 265 cfs Sept. 19, 1954.

REMARKS.--Records good. Water-quality records for the current year are included in this report.

REVISIONS (WATER YEARS).--WSP 758: Drainage area, 1933(M). WSP 893: 1930(M), 1935(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	663	5,730	1,100	900	1,600	2,040	1,680	1,840	2,400	1,440	4,720	842
2	631	3,900	1,060	950	1,100	2,020	1,590	1,660	2,080	1,540	3,530	918
3	616	3,850	1,040	1,000	800	2,640	1,570	1,610	2,020	1,780	2,960	1,020
4	596	3,310	1,010	1,500	900	4,150	1,500	1,560	2,210	1,660	2,650	1,030
5	559	2,640	960	2,200	2,000	3,610	1,520	1,440	1,780	1,430	2,330	928
6	542	2,250	944	2,320	4,500	3,060	1,530	1,590	1,610	1,340	2,910	872
7	540	2,050	886	1,860	3,510	2,830	2,100	4,380	1,510	1,360	3,080	839
8	548	1,880	856	1,550	3,960	2,610	2,080	6,300	1,860	1,520	2,700	887
9	577	1,750	942	1,420	4,900	2,260	1,880	4,350	1,760	1,730	2,390	1,010
10	683	1,690	968	1,320	3,640	2,160	1,700	3,250	1,550	1,640	2,150	878
11	882	2,710	951	1,250	3,240	2,120	1,590	2,440	1,500	1,300	2,230	1,470
12	959	2,900	949	1,210	2,950	2,040	1,530	2,160	1,670	1,800	2,560	1,820
13	866	2,330	1,000	1,170	4,140	1,950	1,530	4,820	1,550	1,700	2,290	1,400
14	776	2,030	987	1,150	5,980	1,980	1,470	5,120	1,940	1,600	1,900	1,120
15	752	1,870	903	1,420	4,040	1,980	1,420	3,870	2,120	1,500	1,630	963
16	720	1,740	947	1,370	3,200	2,040	1,380	4,340	2,200	1,400	1,430	864
17	664	1,600	1,200	1,240	2,800	1,890	1,340	4,080	2,010	1,300	1,330	862
18	630	1,500	1,230	1,190	2,500	1,790	1,310	3,340	1,770	1,200	1,330	972
19	622	1,420	1,130	900	2,350	1,790	1,270	2,770	1,690	1,250	1,340	2,850
20	637	1,440	1,040	720	2,490	1,930	1,240	2,530	2,630	1,300	1,260	2,600
21	1,490	1,610	1,260	800	2,830	1,770	1,230	3,400	2,660	1,400	1,140	2,660
22	2,150	1,490	2,220	1,100	2,850	1,750	1,350	2,820	2,390	1,500	1,100	3,270
23	1,490	1,360	2,200	2,000	4,460	1,750	1,460	2,210	3,000	1,300	1,490	2,500
24	1,030	1,210	2,710	3,900	3,920	1,680	1,540	1,970	3,990	1,350	1,330	1,800
25	889	1,030	2,480	3,040	3,110	1,590	1,490	1,860	2,760	1,400	1,180	1,490
26	828	1,100	1,960	2,870	2,610	1,640	1,320	1,800	2,080	1,500	1,030	1,300
27	795	1,320	1,550	2,190	2,490	1,660	1,230	1,650	1,880	1,660	985	1,200
28	770	1,340	1,100	1,730	2,260	1,710	1,930	1,750	1,690	1,650	1,070	1,250
29	809	1,190	1,000	1,500	-------	1,790	2,870	2,850	1,600	1,580	949	1,100
30	3,800	1,130	950	1,600	-------	1,890	2,220	3,190	1,530	3,710	890	1,050
31	7,720	-------	900	2,000	-------	1,770	-------	2,920	-------	4,590	862	-------
TOTAL	35,234	61,370	38,433	49,370	85,130	65,890	47,870	89,870	61,440	51,930	58,746	41,765
MEAN	1,137	2,046	1,240	1,593	3,040	2,125	1,596	2,899	2,048	1,675	1,895	1,392
MAX	7,720	5,730	2,710	3,900	5,980	4,150	2,870	6,300	3,990	4,590	4,720	3,270
MIN	540	1,030	856	720	800	1,590	1,230	1,440	1,500	1,200	862	839
CFSM	1.01	1.81	1.10	1.41	2.69	1.88	1.41	2.56	1.81	1.48	1.68	1.23
IN.	1.16	2.02	1.26	1.62	2.80	2.17	1.57	2.96	2.02	1.71	1.93	1.37

CAL YR 1970 TOTAL 615,159 MEAN 1,685 MAX 21,900 MIN 507 CFSM 1.49 IN 20.23
WTR YR 1971 TOTAL 687,048 MEAN 1,882 MAX 7,720 MIN 540 CFSM 1.66 IN 22.60

PEAK DISCHARGE (BASE, 9,000 CFS).--NO PEAK ABOVE BASE.

03165000 CHESTNUT CREEK AT GALAX, VA.

LOCATION.--Lat 36°38'45", long 80°55'10", Galax City, on right bank 200 ft upstream from bridge on State Highway 89 and 1.7 miles downstream from Wards Mill Branch.

DRAINAGE AREA.--39 sq mi, approximately.

PERIOD OF RECORD.--September 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,344.17 ft above mean sea level. Prior to June 25, 1948, nonrecording gage, and June 25, 1948, to May 28, 1953, water-stage recorder, at site 200 ft upstream at datum 0.86 ft higher.

AVERAGE DISCHARGE.--27 years, 63.7 cfs (22.18 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,740 cfs Sept. 11 (gage height, 6.61 ft); minimum, 29 cfs Jan. 31 (gage height, 0.51 ft), result of freezeup; minimum daily, 33 cfs Oct. 4-8, Jan. 1, 20, Sept. 9, 10.

Period of record: Maximum discharge, 6,980 cfs Oct. 17, 1947 (gage height, 14.4 ft, from floodmark, site and datum then in use), from rating curve extended above 2,200 cfs on basis of two slope-area and one contracted-opening measurements at gage heights 9.5, 14.4, and 17.4 ft, respectively, site and datum then in use; minimum, 13 cfs Jan. 5, 1956, result of freezeup; minimum daily, 14 cfs Sept. 2, 1953, Sept. 18, 1954; minimum gage height, 0.51 ft Dec. 25, 1969, Jan. 31, 1971.

Flood of Aug. 14, 1940, reached a stage of 17.4 ft, at site and datum used 1944-53 (discharge, 11,000 cfs, by contracted-opening measurement).

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1385: 1953.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	149	43	33	35	57	46	46	63	58	76	35
2	35	96	43	34	34	64	47	45	57	65	63	37
3	34	96	43	40	41	108	47	45	55	57	53	37
4	33	58	42	55	44	97	45	43	59	51	48	36
5	33	50	41	104	132	75	45	42	51	48	47	35
6	33	45	41	61	86	69	63	69	48	54	47	35
7	33	43	43	52	120	64	84	102	90	55	46	34
8	33	40	42	48	174	58	75	99	94	56	43	35
9	35	41	41	47	85	56	60	62	65	48	42	33
10	38	45	42	46	62	57	53	54	90	47	42	33
11	38	48	41	45	62	58	50	50	69	47	44	587
12	36	50	42	45	54	55	49	55	78	50	53	161
13	35	45	41	45	297	54	48	328	61	48	42	94
14	35	43	40	47	140	54	46	137	62	46	40	63
15	36	41	40	46	108	55	46	97	54	44	39	52
16	35	40	59	43	90	52	45	107	101	43	38	48
17	34	39	60	43	84	49	44	77	88	42	41	48
18	34	38	47	42	81	48	44	66	72	43	43	75
19	34	44	44	38	78	56	43	60	63	85	41	776
20	36	65	43	33	86	52	43	69	65	56	38	224
21	143	54	73	35	76	49	46	72	63	47	36	312
22	52	48	61	40	125	48	51	56	55	45	80	210
23	42	47	56	60	125	48	50	53	153	43	59	126
24	39	53	51	48	82	46	50	52	110	57	42	102
25	38	70	47	49	71	47	44	52	70	50	39	84
26	37	46	46	46	70	49	42	49	61	52	38	77
27	37	46	69	42	69	53	42	48	56	46	46	71
28	36	46	52	40	59	55	99	77	52	43	38	66
29	43	45	42	44	------	54	53	114	102	49	36	62
30	245	44	40	45	------	49	48	121	73	73	35	59
31	402	------	36	40	------	47	------	78	------	95	35	------
TOTAL	1,809	1,615	1,451	1,436	2,570	1,783	1,548	2,425	2,180	1,643	1,410	3,647
MEAN	58.4	53.8	46.8	46.3	91.8	57.5	51.6	78.2	72.7	53.0	45.5	122
MAX	402	149	73	104	297	108	99	328	153	95	80	776
MIN	33	38	36	33	34	46	42	42	48	42	35	33
CFSM	1.50	1.38	1.20	1.19	2.35	1.47	1.32	2.01	1.86	1.36	1.17	3.13
IN.	1.73	1.54	1.38	1.37	2.45	1.70	1.48	2.31	2.08	1.57	1.34	3.48

CAL YR 1970 TOTAL 22,136 MEAN 60.6 MAX 862 MIN 33 CFSM 1.55 IN 21.11
WTR YR 1971 TOTAL 23,517 MEAN 64.4 MAX 776 MIN 33 CFSM 1.65 IN 22.43

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
9-11	1115	6.61	1,740	9-21	0215	3.70	730
9-19	0815	6.34	1,640				

03165500 NEW RIVER AT IVANHOE, VA.

LOCATION.--Lat 36°50'05", long 80°57'10", Wythe County, on left bank at Ivanhoe, 2.1 miles downstream from Big Branch, and 2.3 miles upstream from Cripple Creek.

DRAINAGE AREA.--1,340 sq mi.

PERIOD OF RECORD.--August to December 1927, October 1929 to current year. Monthly discharge only for some periods, published in WSP 1305. Gage-height records collected in vicinity, October 1916 to July 1943, are contained in reports of the National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 1,943.09 ft above mean sea level.

AVERAGE DISCHARGE.--42 years, 2,042 cfs (20.69 inches per year).

EXTREMES.--Current year: Maximum discharge, 9,470 cfs Oct. 31 (gage height, 6.74 ft); minimum, 135 cfs Dec. 28 (gage height, 0.95 ft), result of freezeup; minimum daily, 495 cfs Oct. 17.

Period of record: Maximum discharge, 155,000 cfs Aug. 14, 1940 (gage height, 38.1 ft, from floodmarks), from rating curve extended above 32,000 cfs on basis of flood records for other stations on New River; minimum, 44 cfs Oct. 11, 1965 (gage height, 0.59 ft); minimum daily, 184 cfs July 28, 1930.

Flood in July 1916 reached a stage of 34.8 ft, from floodmark (discharge, 132,000 cfs, from rating curve extended as explained above). Flood in September 1878 was about 5 ft lower than flood in July 1916 and was the highest between 1840 and 1916.

REMARKS.--Records good. Large diurnal fluctuation and some regulation caused by powerplants at Buck, 2.8 miles above station, and at Byllesby, 5.5 miles above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 783: Drainage area, 1933(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	720	6,920	1,450	1,050	1,950	2,730	1,930	1,760	3,430	1,420	4,720	970
2	660	4,770	1,190	1,100	1,240	2,270	1,860	2,020	2,670	1,770	3,810	825
3	620	4,010	1,160	1,180	892	2,990	1,660	1,900	2,260	1,250	2,790	1,150
4	600	3,630	1,130	1,730	1,050	4,270	1,480	1,630	2,560	1,830	2,600	673
5	640	3,080	701	2,580	2,200	4,690	2,110	1,650	1,720	1,560	2,610	1,170
6	620	2,480	1,150	2,900	5,700	3,680	1,700	1,870	1,920	1,880	2,460	969
7	600	1,890	1,360	2,410	4,670	3,240	2,200	3,880	2,060	1,200	2,780	1,300
8	590	1,950	940	1,880	4,640	3,170	2,340	7,170	1,910	1,690	2,670	833
9	580	1,880	1,000	1,770	5,470	2,670	1,950	5,640	2,110	1,680	2,350	1,100
10	589	1,860	1,220	1,580	4,170	2,600	1,680	3,800	2,000	1,360	2,020	963
11	995	1,570	1,030	1,810	3,060	2,510	1,480	2,910	1,640	1,760	1,810	1,990
12	1,280	2,610	810	1,490	2,850	2,440	1,430	2,270	2,090	2,010	2,310	2,340
13	1,070	2,090	1,140	1,440	3,880	1,940	1,250	4,560	1,400	1,680	2,170	2,370
14	855	1,750	1,740	1,400	7,350	2,310	973	6,460	2,170	1,860	1,420	1,350
15	848	1,970	865	1,560	5,400	2,580	1,140	4,780	2,370	1,600	1,560	1,170
16	766	1,860	1,060	1,360	3,800	2,310	1,340	4,940	2,250	1,200	1,680	916
17	495	1,620	1,290	1,530	3,330	2,310	1,160	4,660	2,450	987	1,540	1,090
18	672	1,750	1,410	1,620	3,200	2,110	1,180	3,850	2,060	887	1,160	680
19	1,070	1,510	1,060	930	2,840	2,120	1,150	3,370	1,530	1,280	1,470	3,950
20	764	1,240	1,200	750	2,710	1,970	781	3,010	2,350	1,320	1,260	4,030
21	1,530	1,410	1,710	856	3,130	2,090	838	3,900	3,310	1,520	986	3,530
22	2,450	1,700	2,310	1,340	3,520	2,170	872	3,490	2,710	1,500	1,100	3,480
23	1,760	1,770	2,450	2,130	4,740	1,940	989	2,550	3,330	1,240	1,850	3,500
24	1,070	1,110	2,820	4,590	4,930	1,970	1,110	2,650	4,970	783	1,540	1,810
25	972	886	2,710	3,490	3,660	1,800	1,480	2,170	3,420	1,380	1,440	1,630
26	1,080	1,150	2,330	3,080	3,260	1,880	1,380	2,030	2,230	1,610	1,090	1,420
27	954	1,840	1,620	2,250	2,420	1,530	1,400	1,950	1,850	1,590	1,140	1,720
28	888	1,380	1,200	1,890	2,770	1,950	1,870	2,090	2,280	1,710	731	1,350
29	934	1,440	1,100	1,530	------	2,310	3,350	2,740	1,830	1,420	1,050	1,300
30	2,850	1,530	1,000	1,740	------	1,780	2,650	4,560	1,780	3,090	1,250	1,260
31	7,850	------	1,000	2,550	------	1,680	------	3,820	------	4,320	912	------
TOTAL	37,372	64,656	43,156	57,516	98,812	76,010	46,733	104,080	70,660	50,387	58,279	50,839
MEAN	1,206	2,155	1,392	1,855	3,529	2,452	1,558	3,357	2,355	1,625	1,880	1,695
MAX	7,850	6,920	2,820	4,590	7,350	4,690	3,350	7,170	4,970	4,320	4,720	4,030
MIN	495	886	701	750	892	1,530	781	1,630	1,400	783	731	673
CFSM	.90	1.61	1.04	1.38	2.63	1.83	1.16	2.51	1.76	1.21	1.40	1.26
IN.	1.04	1.79	1.20	1.60	2.74	2.11	1.30	2.89	1.96	1.40	1.62	1.41

CAL YR 1970 TOTAL 674,463 MEAN 1,848 MAX 19,500 MIN 239 CFSM 1.38 IN 18.72
WTR YR 1971 TOTAL 758,500 MEAN 2,078 MAX 7,850 MIN 495 CFSM 1.55 IN 21.06

PEAK DISCHARGE (BASE, 13,500 CFS).--NO PEAK ABOVE BASE.

03167000 REED CREEK AT GRAHAMS FORGE, VA.

LOCATION.--Lat 36°56'20", long 80°53'15", Wythe County, on right bank 35 ft upstream from highway bridge at Grahams Forge, 2.2 miles downstream from Glade Creek, and 7.3 miles upstream from mouth.

DRAINAGE AREA.--247 sq mi.

PERIOD OF RECORD.--July 1908 to September 1916, January 1927 to current year. Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 1,924.65 ft above mean sea level. Prior to Oct. 1, 1916, nonrecording gage at same site at datum 0.68 ft lower. Feb. 3, 1927, to Oct. 28, 1934, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--52 years, 258 cfs (14.18 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,290 cfs Feb. 14 (gage height, 4.72 ft); minimum, 39 cfs Oct. 7 (gage height, 1.23 ft); minimum daily, 55 cfs Oct. 14-19.

Period of record: Maximum discharge, 17,500 cfs July 16, 1916 (gage height, 11.4 ft, present datum, from floodmarks), from rating curve extended above 7,600 cfs on basis of velocity-area study; minimum observed, about 5 cfs Dec. 22, 1909 (gage height, 0.49 ft, present datum), result of freezeup; minimum daily, 22 cfs Jan. 30, 1934.

REMARKS.--Records good. Occasional diurnal fluctuation at low flow caused by mills above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1235: 1912-13, 1915-16. WSP 1275: 1911, 1927-28(M), 1930-34(M). WSP 1705: 1913(M), 1916(M), 1957 calendar year runoff. WSP 1725: 1915 calendar year runoff.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	534	96	100	195	326	235	315	777	253	197	83
2	63	265	98	110	176	315	218	261	520	212	209	84
3	61	376	88	120	199	519	211	240	410	192	187	84
4	59	360	84	134	203	1,190	194	216	337	176	176	83
5	57	246	80	220	542	789	183	195	292	164	151	83
6	56	199	80	296	1,140	594	211	348	262	161	573	81
7	57	177	77	248	614	524	556	2,440	242	177	586	81
8	56	159	76	210	1,070	480	770	1,810	240	157	326	103
9	57	143	80	190	1,400	415	577	958	229	146	213	89
10	58	135	79	176	657	378	452	632	208	145	172	82
11	61	168	81	162	486	356	362	479	197	141	153	96
12	59	214	83	152	441	315	305	443	190	153	169	115
13	56	233	88	143	1,600	292	271	964	200	143	153	99
14	55	250	89	142	2,180	274	249	874	210	134	133	89
15	55	208	83	158	942	266	228	623	334	129	122	86
16	55	184	86	150	657	262	213	917	280	126	115	82
17	55	164	95	130	595	239	203	854	560	122	110	81
18	55	163	99	125	715	225	193	606	353	117	109	85
19	55	153	102	120	730	221	183	477	275	120	111	159
20	56	152	103	110	853	228	175	450	687	127	106	205
21	87	154	125	130	827	216	171	405	468	127	101	210
22	89	139	901	154	729	205	201	329	362	117	117	154
23	78	128	546	447	1,220	203	206	288	354	112	119	128
24	68	117	666	730	814	199	216	264	1,030	109	117	115
25	65	110	543	564	601	192	216	247	507	107	102	105
26	63	122	351	740	506	202	207	231	320	113	97	100
27	61	106	246	476	451	200	199	213	261	114	93	100
28	60	102	170	319	368	243	413	235	228	108	90	97
29	65	100	120	260	------	307	691	575	236	122	88	94
30	244	99	100	280	------	296	413	1,720	341	124	86	89
31	595	------	95	302	------	260	------	1,540	------	224	85	------
TOTAL	2,626	5,660	5,610	7,598	20,911	10,731	8,922	20,149	10,910	4,472	5,166	3,142
MEAN	84.7	189	181	245	747	346	297	650	364	144	167	105
MAX	595	534	901	740	2,180	1,190	770	2,440	1,030	253	586	210
MIN	55	99	76	100	176	192	171	195	190	107	85	81
CFSM	.34	.77	.73	.99	3.02	1.40	1.20	2.63	1.47	.58	.68	.43
IN.	.40	.85	.84	1.14	3.15	1.62	1.34	3.03	1.64	.67	.78	.47

CAL YR 1970 TOTAL 65,055 MEAN 178 MAX 1,690 MIN 55 CFSM .72 IN 9.80
WTR YR 1971 TOTAL 105,897 MEAN 290 MAX 2,440 MIN 55 CFSM 1.17 IN 15.95

PEAK DISCHARGE (BASE, 2,300 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-14	0030	4.72	3,290	5- 7	2100	4.53	2,990

03167500 BIG REED ISLAND CREEK NEAR ALLISONIA, VA.

LOCATION.--Lat 36°53'20", long 80°43'40", Pulaski County, on left bank 700 ft downstream from highway bridge, 3.5 miles southeast of Allisonia, 4 miles upstream from Little Reed Island Creek, and 4.5 miles upstream from mouth.

DRAINAGE AREA.--278 sq mi.

PERIOD OF RECORD.--August 1908 to September 1916, April 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,902.74 ft above mean sea level. Prior to Sept. 30, 1916, nonrecording gage at site 4 miles downstream at different datum.

AVERAGE DISCHARGE.--40 years, 387 cfs (18.90 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,080 cfs Feb. 13 (gage height, 7.65 ft); minimum, 63 cfs Jan. 20 (gage height, 1.63 ft), result of freezeup; minimum daily, 100 cfs Dec. 31.

Period of record: Maximum discharge, 14,500 cfs Sept. 30, 1959 (gage height, 12.54 ft), from rating curve extended above 6,000 cfs on basis of slope-area measurement of peak flow; minimum, 63 cfs Jan. 20, 1971 (gage height, 1.63 ft), result of freezeup; minimum daily, 84 cfs Sept. 17, 1956, Sept. 23-25, 1963.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1033: 1939(P), 1940, 1941-43(P). WSP 1305: 1912(M). WSP 1625: 1940, 1945(M), 1947, 1951, 1952(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	574	179	110	200	335	246	270	522	264	379	160
2	140	371	176	130	190	340	243	250	423	443	319	161
3	138	367	173	180	200	591	291	251	381	288	275	164
4	130	320	169	230	300	807	250	239	348	246	336	167
5	122	270	161	350	785	518	237	224	320	228	339	168
6	125	233	161	500	953	454	283	280	338	225	308	162
7	127	214	140	331	512	410	515	1,040	370	240	289	162
8	127	203	138	267	1,040	364	532	896	562	242	235	179
9	130	195	234	263	861	316	432	539	404	233	221	160
10	133	196	201	281	339	339	356	400	341	414	208	151
11	140	234	172	220	321	328	304	341	310	339	319	163
12	141	240	171	214	356	313	284	319	345	272	377	299
13	135	243	177	209	2,740	297	269	2,460	373	249	237	405
14	133	210	165	223	1,510	293	254	1,570	348	225	205	215
15	146	204	155	231	646	290	241	785	318	214	194	180
16	149	202	176	201	484	316	238	899	330	204	189	170
17	135	189	339	197	402	274	233	742	424	195	185	160
18	133	185	248	209	366	261	229	544	337	192	200	170
19	135	185	203	149	342	276	222	452	314	460	221	300
20	140	203	191	114	379	362	217	437	314	348	195	700
21	249	346	242	140	401	284	223	550	342	251	181	1,100
22	323	234	471	230	474	273	295	407	452	218	208	600
23	183	208	321	250	1,460	269	256	358	826	200	421	450
24	160	169	290	335	648	252	306	337	520	190	235	350
25	153	126	240	308	474	244	251	332	353	200	192	320
26	152	247	200	284	415	266	225	317	301	250	182	280
27	149	256	157	185	412	265	216	291	275	220	197	250
28	148	214	125	148	365	323	449	372	258	240	191	250
29	158	192	110	170	------	305	438	688	246	220	172	230
30	829	183	105	210	------	282	306	1,500	265	599	166	220
31	1,140	------	100	260	------	255	------	791	------	718	163	------
TOTAL	6,346	7,213	6,090	7,129	17,575	10,502	8,841	18,881	11,260	8,827	7,539	8,446
MEAN	205	240	196	230	628	339	295	609	375	285	243	282
MAX	1,140	574	471	500	2,740	807	532	2,460	826	718	421	1,100
MIN	122	126	100	110	190	244	216	224	246	190	163	151
CFSM	.74	.86	.71	.83	2.26	1.22	1.06	2.19	1.35	1.03	.87	1.01
IN.	.85	.97	.81	.95	2.35	1.41	1.18	2.53	1.51	1.18	1.01	1.13

CAL YR 1970 TOTAL 107,421 MEAN 294 MAX 2,250 MIN 100 CFSM 1.06 IN 14.37
WTR YR 1971 TOTAL 118,649 MEAN 325 MAX 2,740 MIN 100 CFSM 1.17 IN 15.88

PEAK DISCHARGE (BASE, 3,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-13	1800	7.65	6,080	5-13	1000	6.42	4,240

03168000 NEW RIVER AT ALLISONIA, VA.

LOCATION.--Lat 36°56'15", long 80°44'45", Pulaski County, on left bank 0.2 mile downstream from Big Reed Island Creek, and 0.5 mile upstream from Allisonia.

DRAINAGE AREA.--2,202 sq mi.

PERIOD OF RECORD.--September 1929 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,848.36 ft above mean sea level.

AVERAGE DISCHARGE.--42 years, 3,019 cfs (18.62 inches per year).

EXTREMES.--Current year: Maximum discharge, 16,600 cfs Feb. 13 (gage height, 5.31 ft); minimum, 634 cfs Oct. 1 (gage height, 0.83 ft); minimum daily, 911 cfs Oct. 17.

Period of record: Maximum discharge, 185,000 cfs Aug. 14, 1940 (gage height, 23.42 ft), from rating curve extended above 52,000 cfs on basis of flood records for other stations on New River; minimum, 412 cfs Sept. 7, 1930 (gage height, 0.47 ft); minimum daily, 453 cfs Sept. 6, 1930.

REMARKS.--Records good. Large diurnal fluctuation and some regulation by powerplants 25 miles above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 783: Drainage area. WSP 823: 1936. WSP 1305: 1933(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,110	9,470	1,660	1,200	2,550	3,920	2,820	3,020	6,090	2,600	6,910	1,390
2	1,130	6,350	1,800	1,300	1,610	3,560	2,650	2,990	4,630	2,730	5,420	1,410
3	964	5,310	1,470	1,720	1,930	4,700	2,660	2,870	3,860	2,110	4,160	1,520
4	951	5,050	1,550	2,040	1,980	6,900	2,220	2,540	4,120	2,600	3,400	1,290
5	1,140	4,130	1,380	3,680	4,370	7,080	2,710	2,410	2,920	2,270	4,060	1,440
6	1,030	3,120	1,330	4,850	9,410	5,750	2,670	2,700	3,000	2,600	3,670	1,580
7	956	2,620	1,750	3,400	6,760	4,980	3,730	8,000	3,160	2,070	4,780	1,530
8	951	2,670	1,360	2,660	8,130	4,710	4,790	12,100	3,260	2,260	4,300	1,320
9	1,030	2,590	1,430	2,420	9,400	4,000	3,950	8,870	3,250	2,370	3,660	1,900
10	1,010	2,340	1,650	2,270	6,110	3,640	3,520	6,020	2,950	2,340	2,870	1,180
11	1,030	2,720	1,420	2,090	4,470	3,660	3,100	4,860	2,770	2,500	2,670	1,790
12	1,640	4,170	1,190	2,300	4,370	3,580	3,210	3,800	2,920	2,960	3,450	3,820
13	1,430	3,500	1,510	1,870	9,500	3,130	2,600	9,430	2,700	2,470	3,370	3,740
14	1,290	2,760	1,990	2,000	13,200	3,220	2,300	10,700	3,130	2,700	2,190	2,050
15	1,180	2,930	1,470	2,080	3,290	3,460	2,470	7,460	3,430	2,250	2,200	1,780
16	1,080	2,490	1,340	1,940	6,080	3,260	2,410	7,820	3,580	1,980	2,500	1,390
17	911	2,270	1,770	2,060	5,120	3,210	2,300	7,440	4,120	1,700	1,910	1,570
18	960	2,270	2,040	2,170	5,020	2,840	2,050	6,400	3,270	1,570	1,810	1,200
19	1,330	2,030	1,580	1,320	4,630	3,180	2,450	5,180	2,550	2,530	2,100	4,250
20	1,100	2,220	1,620	1,250	4,630	3,000	2,030	4,640	3,720	2,320	1,890	6,440
21	1,810	2,270	2,200	1,290	5,350	3,070	2,180	5,940	5,270	2,100	1,490	5,490
22	2,990	2,320	3,350	1,730	5,410	2,850	2,350	5,170	4,410	2,170	1,650	4,830
23	2,440	2,260	3,790	2,640	8,550	2,710	2,170	4,200	5,790	1,740	2,680	5,120
24	1,480	1,740	3,900	6,030	7,630	2,760	2,170	3,820	7,340	1,590	2,090	3,420
25	1,510	1,160	4,320	5,260	5,830	2,590	2,620	3,320	5,570	1,820	2,170	2,260
26	1,350	1,620	3,310	5,140	4,930	2,830	2,540	3,090	3,640	2,470	1,790	2,110
27	1,230	2,010	2,410	3,810	4,330	2,280	2,110	2,970	3,050	2,210	1,530	2,240
28	1,240	2,010	1,630	2,230	3,990	2,810	2,950	3,130	3,330	2,390	1,370	2,080
29	1,470	1,840	1,500	2,420	------	3,210	5,100	4,300	2,580	2,130	1,420	1,850
30	3,630	1,960	1,400	2,790	------	3,020	4,160	9,840	2,800	3,800	1,780	1,910
31	10,600	------	1,300	4,130	------	3,170	------	7,830	------	6,310	1,400	------
TOTAL	51,973	90,200	60,420	82,090	163,580	113,080	84,990	172,860	113,210	75,660	86,690	73,900
MEAN	1,677	3,007	1,949	2,648	5,842	3,648	2,833	5,576	3,774	2,441	2,796	2,463
MAX	10,600	9,470	4,320	6,030	13,200	7,080	5,100	12,100	7,340	6,310	6,910	6,440
MIN	911	1,160	1,190	1,200	1,610	2,280	2,030	2,410	2,550	1,570	1,370	1,180
CFSM	.76	1.37	.89	1.20	2.65	1.66	1.29	2.53	1.71	1.11	1.27	1.12
IN.	.88	1.52	1.02	1.39	2.76	1.91	1.44	2.92	1.91	1.28	1.46	1.25

CAL YR 1970 TOTAL 993,725 MEAN 2,723 MAX 26,000 MIN 785 CFSM 1.24 IN 16.79
WTR YR 1971 TOTAL 1,168,653 MEAN 3,202 MAX 13,200 MIN 911 CFSM 1.45 IN 19.74

PEAK DISCHARGE (BASE, 17,500 CFS).--NO PEAK ABOVE BASE.

03169000 CLAYTOR RESERVOIR NEAR RADFORD, VA.

LOCATION.--Lat 37°04'28", long 80°35'05", Pulaski County, at Claytor Dam on New River, 0.5 mile upstream from Little River, and 5.5 miles upstream from Radford.

DRAINAGE AREA.--2,382 sq mi.

PERIOD OF RECORD.--May 1939 to current year (monthly figures only).

GAGE.--Water-stage recorder. Datum of gage is at approximately mean sea level (levels by Appalachian Power Co.). Prior to Sept. 11, 1943, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by gravity overflow concrete dam. Spillway with crest at elevation 1,818.5 ft is equipped with 9 lift gates 30 ft high by 50 ft wide. Dam completed and storage began May 22, 1939; water in reservoir reached minimum pool elevation in January 1940. Total level-pool capacity at elevation 1,847.0 ft (1.5 ft below top of gates) is 230,100 acre-ft of which about 100,000 acre-ft is controlled storage above elevation 1,820.0 ft (minimum pool). Reservoir is used for power.

COOPERATION.--Records furnished by Appalachian Power Co.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	1,845.90	225,100	-
Oct. 31	1,844.75	220,200	-4,900
Nov. 30	1,845.61	223,800	+3,600
Dec. 31	1,844.61	219,600	-4,200
CAL YR 1970	-	-	-9,100
Jan. 31	1,844.52	219,200	-400
Feb. 28	1,845.00	221,200	+2,000
Mar. 31	1,845.26	222,300	+1,100
Apr. 30	1,845.44	223,100	+800
May 31	1,845.58	223,700	+600
June 30	1,844.27	218,100	-5,600
July 31	1,844.25	218,000	-100
Aug. 31	1,845.82	224,700	+6,700
Sept. 30	1,844.89	220,800	-3,900
WTR YR 1971	-	-	-4,300

03170000 LITTLE RIVER AT GRAYSONTON, VA.

LOCATION.--Lat 37°02'15", long 80°33'25", Pulaski County, on left bank at upstream side of highway bridge at Snowville, 0.5 mile southeast of Graysonton, 7 miles south of Radford, and 8.6 miles upstream from mouth.

DRAINAGE AREA.--300 sq mi.

PERIOD OF RECORD.--October 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,816.04 ft above mean sea level. Prior to Nov. 20, 1931, nonrecording gage at bridge 1 mile downstream at datum 17.99 ft lower. Nov. 20, 1931, to Nov. 12, 1941, water-stage recorder 1.2 miles downstream at datum 20.58 ft lower.

AVERAGE DISCHARGE.--43 years, 352 cfs (15.93 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,180 cfs Feb. 13 (gage height, 4.65 ft); minimum, 76 cfs Dec. 8, Jan. 20, result of freezeup; minimum daily, 80 cfs Oct. 6; minimum gage height, 0.81 ft Dec. 8.

Period of record: Maximum discharge, 18,500 cfs Sept. 30, 1959 (gage height, 12.76 ft), from rating curve extended above 6,000 cfs on basis of slope-area measurement of peak flow; minimum, 21 cfs Feb. 22, 1942, result of freezeup; minimum daily, 50 cfs Sept. 21, 1932.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 823: 1929-36. WSP 1143: 1945. WSP 1305: 1929(M). WSP 1555: Drainage area (at site used 1928-41). WSP 1625: 1951(M). WSP 1725: 1936(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	1,230	179	120	163	281	238	235	746	312	352	107
2	97	622	175	150	150	282	232	221	521	472	224	106
3	94	413	173	180	160	411	240	222	434	293	237	128
4	89	360	167	235	180	710	233	222	389	250	195	120
5	82	313	161	547	564	502	217	205	342	223	201	118
6	80	287	157	546	1,370	475	240	252	314	213	200	117
7	84	255	135	279	495	420	515	873	296	229	191	115
8	86	223	108	188	977	376	654	857	294	251	174	106
9	88	206	174	210	944	300	682	565	372	227	156	102
10	93	199	202	200	272	318	488	403	295	220	156	97
11	104	308	173	206	282	308	370	339	260	220	153	97
12	107	368	172	203	341	296	330	301	249	201	176	227
13	105	366	175	193	1,940	281	301	1,260	286	223	177	375
14	100	313	166	188	1,500	273	273	1,200	287	202	143	207
15	99	258	157	208	550	274	250	678	269	191	130	142
16	104	252	162	186	400	281	236	862	459	183	124	123
17	101	218	243	147	350	257	228	810	577	190	122	117
18	95	205	288	120	315	242	221	565	354	180	131	120
19	97	201	226	110	292	243	212	456	306	279	160	149
20	101	205	197	100	314	272	203	416	279	257	153	516
21	121	2 7	214	122	356	248	201	1,200	317	202	130	882
22	414	2.4	401	191	399	233	233	591	284	182	147	437
23	185	203	320	234	1,080	235	230	429	295	176	315	335
24	136	161	264	216	617	229	253	374	474	166	195	263
25	123	122	228	249	439	214	234	345	322	186	141	259
26	120	197	183	242	368	232	200	316	259	202	127	203
27	117	215	126	161	344	246	190	283	238	196	122	189
28	114	221	120	142	315	308	297	329	224	183	143	181
29	119	195	110	159	------	338	410	774	291	174	141	170
30	267	183	100	222	------	296	268	2,310	319	305	118	163
31	1,540	------	98	203	------	255	------	1,320	------	400	111	------
TOTAL	5,161	8,810	5,754	6,457	15,477	9,636	8,879	19,213	10,352	7,188	5,245	6,271
MEAN	166	294	186	208	553	311	296	620	345	232	169	209
MAX	1,540	1,230	401	547	1,940	710	682	2,310	746	472	352	882
MIN	80	122	98	100	150	214	190	205	224	166	111	97
CFSM	.55	.98	.62	.69	1.84	1.04	.99	2.07	1.15	.77	.56	.70
IN.	.64	1.09	.71	.80	1.92	1.19	1.10	2.38	1.28	.89	.65	.78

CAL YR 1970 TOTAL 90,240 MEAN 247 MAX 1,540 MIN 79 CFSM .82 IN 11.19
WTR YR 1971 TOTAL 108,443 MEAN 297 MAX 2,310 MIN 80 CFSM .99 IN 13.45

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 6	0030	3.94	3,110	2-13	1730	4.65	4,180

03171000 NEW RIVER AT RADFORD, VA.

LOCATION.--Lat 37°08'30", long 80°34'10", Pulaski County, on left bank 2,000 ft downstream from bridge on U.S. Highway 11 at Radford, 3 miles downstream from Little River, and 5.5 miles downstream from Claytor Dam.

DRAINAGE AREA.--2,748 sq mi.

PERIOD OF RECORD.--October 1907 to September 1915, August 1939 to current year. Records for August 1898 to September 1907, published in WSP 27, 36, 48, 65, 83, 98, 128, 169, 205, 243, and 536, are unreliable and should not be used. Gage-height records collected at same site since 1895, but at different datum, are contained in reports of the National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 1,712.16 ft above mean sea level. Prior to Aug. 30, 1939, nonrecording gage at highway bridge 2,000 ft upstream at datum 0.85 ft lower.

AVERAGE DISCHARGE.--40 years, 3,672 cfs (18.15 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 15,800 cfs May 14 (gage height, 5.80 ft); minimum, 570 cfs Oct. 3 (gage height, 1.38 ft); minimum daily, 782 cfs Oct. 10.

Period of record: Maximum discharge, 218,000 cfs Aug. 14, 1940 (gage height, 35.96 ft), from rating curve extended above 71,000 cfs on basis of records for other stations on New River and flow over Claytor Dam (computed by Appalachian Power Co.); minimum, 165 cfs Aug. 26, 27, 1944 (gage height, 1.08 ft); minimum daily, 550 cfs Aug. 22, 1911.

Flood of July 16, 1916, reached a stage of 35.7 ft (discharge, 200,000 cfs), at site and datum used by Geological Survey 1907-15, from reports of the National Weather Service.

REMARKS.--Records good. Flow regulated since 1939 by Claytor Reservoir (see sta 03169000). Some additional regulation at low flow by dam and powerplant on Little River, 0.5 mile above mouth. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 873: Drainage area. WSP 953: 1940-41. WSP 1305: 1908-12. See also PERIOD OF RECORD.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,460	9,890	1,800	1,310	4,170	5,140	4,640	4,250	6,280	3,910	8,000	1,710
2	1,350	5,990	1,670	1,290	3,120	5,540	4,620	3,870	6,400	3,150	3,300	2,250
3	796	6,720	2,350	1,380	2,400	6,270	1,620	3,600	6,230	1,690	4,000	3,030
4	847	5,970	2,510	4,030	2,240	6,650	1,270	3,600	5,910	1,140	3,000	1,320
5	1,250	4,700	1,360	5,430	2,480	6,610	5,330	2,750	3,000	1,350	5,500	1,110
6	1,390	3,390	1,190	4,760	9,680	7,760	5,330	2,890	2,000	4,120	5,000	958
7	1,490	2,270	1,820	5,050	9,720	4,220	8,050	6,830	2,500	3,470	4,000	2,110
8	1,260	1,020	1,480	4,510	8,230	5,350	5,690	12,300	4,000	3,230	3,500	1,620
9	1,180	2,510	1,550	1,350	12,100	4,080	5,110	11,200	3,200	3,810	3,700	1,550
10	782	5,210	1,610	1,030	9,110	4,580	4,150	7,750	3,800	1,680	4,400	3,480
11	858	3,990	1,760	2,630	4,170	3,970	3,680	5,370	5,000	1,150	4,000	1,030
12	1,380	3,910	1,890	2,360	3,800	4,300	4,230	4,460	3,500	2,480	3,500	4,310
13	2,180	3,620	1,290	2,240	10,400	3,970	3,560	11,500	1,600	4,500	3,100	3,200
14	2,450	3,630	1,940	2,480	13,300	2,410	3,320	12,600	2,800	3,520	3,600	3,590
15	2,230	2,090	2,260	2,510	11,800	4,760	2,990	11,200	4,000	3,110	2,300	3,390
16	1,570	3,320	2,460	1,620	6,210	3,910	3,210	8,180	5,000	2,830	1,700	1,330
17	798	2,970	2,080	1,260	7,630	3,820	1,980	5,800	6,000	1,540	2,100	2,060
18	870	2,470	2,620	2,290	5,570	3,520	1,040	7,020	5,500	1,100	2,130	987
19	1,250	2,350	2,290	2,530	5,920	4,930	2,110	7,260	3,300	2,450	2,280	2,660
20	1,120	2,720	1,160	2,060	4,530	3,800	2,000	5,800	2,500	2,290	2,900	5,040
21	2,590	1,380	4,400	2,600	6,580	1,130	2,520	8,050	3,500	3,150	1,210	6,840
22	1,860	2,390	4,510	2,840	7,180	3,640	1,980	6,110	5,420	2,950	1,130	6,560
23	3,160	3,900	4,590	1,160	7,920	3,610	1,900	2,770	7,300	3,320	2,180	6,000
24	1,670	3,250	3,870	4,380	7,170	3,700	1,610	4,180	7,330	1,070	2,400	4,870
25	957	2,690	2,980	6,140	7,610	3,190	1,290	5,080	8,190	1,760	2,450	1,860
26	1,800	872	4,600	6,530	7,550	3,180	2,210	4,020	5,250	2,450	2,160	1,410
27	1,430	2,230	2,020	6,420	5,210	1,330	2,410	3,490	1,360	3,840	2,440	2,930
28	1,520	1,410	3,360	5,120	2,020	1,350	3,040	4,750	5,000	2,340	1,250	2,320
29	1,580	1,030	2,430	3,410	------	4,220	2,870	6,370	4,220	2,480	1,070	2,260
30	9,890	1,780	1,910	1,430	------	3,870	4,480	10,600	4,870	4,550	1,820	2,490
31	8,210	------	2,350	2,440	------	3,510	------	8,500	------	7,000	1,810	------
TOTAL	61,178	99,672	74,110	94,590	187,820	128,320	98,240	202,150	134,960	87,430	91,930	84,275
MEAN	1,973	3,322	2,391	3,051	6,708	4,139	3,275	6,521	4,499	2,820	2,965	2,809
MAX	9,890	9,890	4,600	6,530	13,300	7,760	8,050	12,600	8,190	7,000	8,000	6,840
MIN	782	872	1,160	1,030	2,020	1,130	1,040	2,750	1,360	1,070	1,070	958
(*)	-80	+62	-70	-6	+37	+18	+13	+10	-94	-1	+109	-67
MEAN‡	1,893	3,384	2,321	3,045	6,745	4,157	3,288	6,531	4,405	2,819	3,074	2,742
CFSM‡	.69	1.23	.84	1.11	2.45	1.51	1.20	2.38	1.60	1.03	1.12	1.00
IN.‡	.80	1.37	.97	1.28	2.55	1.74	1.34	2.74	1.78	1.19	1.29	1.12

CAL YR 1970 TOTAL 1,101,437 MEAN 3,018 MAX 21,500 MIN 715 MEAN‡ 3,005 CFSM‡ 1.09 IN.‡ 14.83
WTR YR 1971 TOTAL 1,344,675 MEAN 3,684 MAX 13,300 MIN 782 MEAN‡ 3,678 CFSM‡ 1.34 IN.‡ 18.17

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN CLAYTOR RESERVOIR; FURNISHED BY APPALACHIAN POWER CO.

‡ ADJUSTED FOR CHANGE IN CONTENTS.

03171500 NEW RIVER AT EGGLESTON, VA.

LOCATION.--Lat 37°17'22", long 80°37'01", Giles County, on left bank 50 ft downstream from highway bridge at Eggleston, 1.9 miles downstream from Spruce Run, and 7.8 miles upstream from Walker Creek.

DRAINAGE AREA.--2,941 sq mi.

PERIOD OF RECORD.--October 1914 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,615.59 ft above mean sea level. Prior to July 2, 1926, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--57 years, 3,849 cfs (17.77 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 17,400 cfs Feb. 14 (gage height, 9.24 ft); maximum gage height, 9.87 ft Feb. 2 (backwater from ice); minimum discharge, 612 cfs Oct. 3 (gage height, 2.49 ft); minimum daily, 725 cfs Oct. 18.

Period of record: Maximum discharge, 219,000 cfs Aug. 14, 1940 (gage height, 41.16 ft), from rating curve extended above 49,000 cfs on basis of flood records for other stations on New River; minimum, 250 cfs Jan. 24, 1966 (gage height, 1.80 ft), result of freezeup; minimum daily, 635 cfs July 20, 21, Sept. 28, 1926.

Flood in September 1878 reached a stage of about 40 ft (discharge, about 209,000 cfs).

REMARKS.--Records good. Flow regulated since 1939 by Claytor Reservoir 30 miles above station (see sta 03169000). Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 536: 1915. WSP 783: Drainage area. WSP 893: 1916(M). WSP 1275: 1918-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,290	9,070	1,820	2,000	3,000	4,680	3,840	4,680	7,000	4,590	9,050	1,690
2	1,400	6,670	1,680	1,240	4,000	4,970	5,210	3,900	7,150	3,910	3,420	2,230
3	1,190	7,340	2,330	1,330	3,200	6,420	3,210	3,660	6,140	2,550	4,240	2,280
4	731	6,030	1,970	2,970	2,700	7,970	1,510	3,820	6,200	1,440	3,010	2,630
5	771	5,650	2,180	5,280	3,330	7,070	3,160	3,050	4,830	1,170	5,980	1,410
6	1,330	4,320	1,360	5,040	8,790	8,380	5,030	3,080	2,020	2,120	5,630	978
7	1,420	2,560	1,690	4,920	10,800	5,820	8,220	8,200	2,830	3,970	4,280	1,180
8	1,340	2,280	1,490	5,540	8,530	4,780	7,490	13,300	4,400	3,650	3,610	1,890
9	1,160	1,680	1,580	2,710	12,900	5,320	5,650	11,800	3,450	4,640	3,790	1,660
10	1,120	4,040	1,490	1,300	10,700	4,210	4,840	9,140	4,080	2,750	4,810	1,640
11	754	5,060	1,770	1,950	4,840	4,960	4,440	5,990	5,430	1,580	4,280	3,550
12	881	3,670	1,580	2,580	4,540	4,340	4,560	5,510	3,580	1,700	3,770	2,230
13	1,740	4,040	2,040	2,270	9,660	4,550	3,980	10,400	1,610	2,960	3,360	3,820
14	2,650	4,000	1,720	2,670	14,900	3,450	3,600	13,800	3,140	4,300	4,050	3,780
15	2,350	3,050	2,210	2,370	12,400	3,280	3,160	11,500	3,950	3,440	2,370	3,790
16	1,640	2,610	2,110	2,310	7,690	4,600	3,230	11,300	5,600	3,090	1,820	2,630
17	1,390	3,650	2,090	1,490	8,360	4,070	2,580	4,960	6,780	2,370	2,190	1,660
18	725	2,820	2,300	2,070	5,920	3,910	1,230	7,730	6,180	1,390	2,100	1,860
19	928	2,410	2,530	2,300	6,250	4,160	1,760	7,640	3,650	1,690	2,250	1,420
20	1,190	2,460	2,200	2,400	5,110	4,970	2,110	6,230	2,530	2,510	2,420	3,850
21	1,650	2,400	2,380	2,800	6,410	2,840	2,700	8,340	2,690	1,970	2,570	7,540
22	2,550	1,100	4,810	3,000	8,070	2,200	2,190	7,480	5,700	3,100	1,300	6,800
23	2,610	3,920	5,190	2,160	8,050	3,890	2,090	3,750	7,170	2,970	1,580	6,980
24	2,460	3,680	4,400	2,650	7,470	3,790	1,940	3,620	7,880	3,170	2,160	5,250
25	1,520	3,140	3,660	6,470	7,980	3,630	1,470	5,450	8,640	1,100	2,960	3,720
26	1,260	1,820	4,100	6,290	8,010	3,280	1,980	4,120	6,200	1,980	2,190	1,830
27	1,590	1,180	3,670	6,880	7,320	2,660	2,490	3,830	3,380	3,350	2,590	2,440
28	1,550	2,110	2,430	5,600	2,500	1,450	3,250	4,420	2,550	2,940	1,780	2,560
29	1,570	1,430	3,010	4,800	-------	3,370	3,210	6,380	4,900	2,550	1,280	2,400
30	7,150	1,210	2,170	2,320	-------	4,170	4,370	11,200	4,460	3,280	1,120	2,590
31	9,990	-------	2,440	1,650	-------	3,760	-------	10,200	-------	7,260	1,940	-------
TOTAL	59,900	105,400	76,400	99,360	203,430	136,950	105,300	218,480	144,120	89,490	97,900	88,288
MEAN	1,932	3,513	2,465	3,205	7,265	4,418	3,510	7,048	4,804	2,887	3,158	2,943
MAX	9,990	9,070	5,190	6,880	14,900	8,380	8,220	13,800	8,640	7,260	9,050	7,540
MIN	725	1,100	1,360	1,240	2,500	1,450	1,230	3,050	1,610	1,100	1,120	978
(*)	-80	+62	-70	-6	+37	+18	+13	+10	-94	-1	+109	-67
MEAN‡	1,852	3,575	2,395	3,199	7,302	4,436	3,523	7,058	4,710	2,886	3,267	2,876
CFSM‡	.63	1.22	.81	1.09	2.48	1.51	1.20	2.40	1.60	.98	1.11	.98
IN.‡	.73	1.36	.93	1.26	2.58	1.74	1.34	2.77	1.78	1.13	1.28	1.09

CAL YR 1970 TOTAL 1,164,456 MEAN 3,190 MAX 22,000 MIN 651 MEAN‡ 3,177 CFSM‡ 1.08 IN.‡ 14.66
WTR YR 1971 TOTAL 1,425,018 MEAN 3,904 MAX 14,900 MIN 725 MEAN‡ 3,898 CFSM‡ 1.33 IN.‡ 17.99

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN CLAYTOR RESERVOIR; FURNISHED BY APPALACHIAN POWER CO.

‡ ADJUSTED FOR CHANGE IN CONTENTS.

03173000 WALKER CREEK AT BANE, VA.

LOCATION.--Lat 37°16'05", long 80°42'35", Giles County, on left bank at Bane, 0.2 mile downstream from bridge on State Highway 100, 0.2 mile downstream from Sugar Run, and 7.9 miles upstream from mouth.

DRAINAGE AREA.--305 sq mi.

PERIOD OF RECORD.--March 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,665.92 ft above mean sea level. Prior to Aug. 1, 1938, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--33 years, 309 cfs (13.76 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,650 cfs Feb. 14 (gage height, 10.38 ft); minimum, 39 cfs Oct. 16-18 (gage height, 2.80 ft).

Period of record: Maximum discharge, 16,500 cfs Jan. 30, 1957 (gage height, 16.50 ft), from rating curve extended above 7,200 cfs on basis of slope-area measurement of peak flow; minimum, 15 cfs Dec. 21, 1958 (gage height, 2.42 ft), result of freezeup; minimum daily, 24 cfs Sept. 27, 28, 1964.

Flood in September 1878 reached a stage of about 23.5 ft.

REMARKS.--Records good except those for period of no gage-height record, which are fair. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1143: 1939(M), 1940, 1944, 1946. WSP 1305: 1938(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	1,090	104	180	306	446	334	508	1,500	220	236	61
2	48	520	100	163	256	424	304	418	1,100	180	178	60
3	46	833	97	171	300	693	287	392	820	160	171	59
4	44	737	94	164	301	1,630	255	349	700	150	141	58
5	42	460	90	269	727	1,180	235	301	570	145	139	58
6	41	333	87	394	1,850	917	245	384	460	140	122	59
7	41	261	82	341	1,100	793	788	2,890	400	174	157	57
8	41	221	80	280	1,380	672	1,350	2,770	350	162	137	56
9	40	189	88	257	1,780	555	1,300	1,650	310	134	119	59
10	42	174	85	237	1,030	503	1,110	1,120	280	132	122	58
11	44	198	83	216	728	470	843	825	260	130	117	59
12	43	238	85	196	648	423	647	669	240	132	105	76
13	44	614	87	180	2,050	388	529	1,370	270	125	103	83
14	43	546	90	193	3,490	366	452	1,530	310	118	92	78
15	41	412	83	287	1,520	346	388	1,160	340	110	84	69
16	41	320	82	350	1,070	336	343	1,410	320	116	78	63
17	39	257	86	338	894	303	309	1,360	300	108	76	59
18	40	223	92	312	1,040	278	282	1,040	280	104	74	61
19	41	198	97	246	1,200	271	256	795	250	101	76	75
20	42	181	95	193	1,490	291	238	635	270	104	79	153
21	56	177	125	200	1,470	271	229	750	260	111	74	212
22	79	162	1,050	230	1,260	254	255	650	300	103	84	147
23	80	148	665	380	1,860	252	252	570	310	93	171	116
24	61	135	651	780	1,290	249	251	500	290	88	147	112
25	51	114	531	647	937	237	244	450	260	85	99	111
26	47	129	435	936	736	247	233	400	220	88	83	99
27	44	122	340	752	623	249	225	360	200	92	75	88
28	43	118	272	504	520	303	602	450	180	91	70	83
29	48	114	233	450	------	439	1,090	1,150	170	126	66	78
30	161	109	200	477	------	437	676	3,100	180	141	64	72
31	968	------	211	454	------	378	------	2,400	------	169	62	------
TOTAL	2,493	9,333	6,692	10,777	31,856	14,601	14,552	32,356	11,700	3,932	3,401	2,479
MEAN	80.4	311	216	348	1,138	471	485	1,044	390	127	110	82.6
MAX	968	1,090	1,050	936	3,490	1,630	1,350	3,100	1,500	220	236	212
MIN	39	109	80	163	256	237	225	301	170	85	62	56
CFSM	.26	1.02	.71	1.14	3.73	1.54	1.59	3.42	1.28	.42	.36	.27
IN.	.30	1.14	.82	1.31	3.89	1.78	1.77	3.95	1.43	.48	.41	.30

CAL YR 1970 TOTAL 83,164 MEAN 228 MAX 2,190 MIN 39 CFSM .75 IN 10.14
WTR YR 1971 TOTAL 144,172 MEAN 395 MAX 3,490 MIN 39 CFSM 1.30 IN 17.58

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2-14	0130	10.38	5,650	5-30	UNKNOWN	9.31	4,060

NOTE.--NO GAGE-HEIGHT RECORD MAY 21 TO JULY 6.

03175500 WOLF CREEK NEAR NARROWS, VA.

LOCATION.--Lat 37°18'20", long 80°51'00", Giles County, on right bank at downstream side of bridge on State Highway 61, 2.8 miles southwest of Narrows, and 3.5 miles upstream from mouth.

DRAINAGE AREA.--223 sq mi.

PERIOD OF RECORD.--July 1908 to September 1916, March 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,583.83 ft above mean sea level. July 22, 1908, to Sept. 30, 1916, and Mar. 31 to Nov. 7, 1938, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--41 years, 286 cfs (17.42 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,520 cfs May 7 (gage height, 8.60 ft); minimum, 30 cfs Oct. 16-20 (gage height, 2.42 ft).

Period of record: Maximum discharge, 12,900 cfs Jan. 29, 1957 (gage height, 12.55 ft in gage well, 13.8 ft from floodmark at downstream side of bridge), from rating curve extended above 5,700 cfs on basis of contracted-opening measurement of peak flow; minimum, 8.8 cfs Dec. 25, 1953 (gage height, 2.28 ft), result of freezeup; minimum daily, 16 cfs Sept. 17, 18, 26-28, 1964.

REMARKS.--Records good. Prior to 1960, slight diurnal fluctuation at low flow caused by mill and dam 300 ft above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 973: 1940-41(M). WSP 1235: 1912-13, 1915-16. WSP 1505: 1940, monthly and yearly runoff. WSP 1725: 1913(M), 1915-16(M), 1941 calendar year runoff.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	817	89	193	537	411	374	605	1,230	168	255	49
2	54	484	83	158	360	392	353	499	875	135	261	47
3	47	579	79	161	300	591	331	486	685	125	412	45
4	42	549	78	165	350	1,020	277	413	540	108	263	46
5	38	430	73	323	1,560	841	249	356	440	96	212	46
6	36	358	69	409	1,970	746	293	738	369	88	584	45
7	35	313	61	355	1,200	739	695	4,050	310	92	458	42
8	34	270	51	297	1,470	709	975	3,340	270	89	297	63
9	33	224	66	268	1,620	611	1,200	1,810	248	86	214	68
10	33	203	68	240	1,010	555	1,120	1,200	220	91	169	49
11	35	496	62	212	784	922	881	913	196	90	145	45
12	36	627	66	192	670	466	709	760	185	85	169	47
13	34	572	83	176	1,570	437	589	1,300	217	78	129	49
14	34	457	81	241	2,030	416	508	1,630	236	69	106	56
15	33	364	70	410	1,210	393	430	1,230	263	64	90	62
16	31	289	69	461	908	382	366	1,200	251	75	79	54
17	30	229	74	430	786	335	322	1,050	242	64	72	47
18	30	196	82	388	918	301	284	873	223	55	75	45
19	30	174	85	305	993	294	249	726	193	60	80	60
20	32	159	86	227	1,240	321	225	612	212	83	71	127
21	41	170	171	196	1,260	288	216	668	202	85	62	102
22	47	152	1,330	234	1,110	279	324	561	238	69	157	88
23	50	140	1,050	533	1,250	348	308	477	238	58	346	77
24	44	128	860	777	952	365	340	414	232	52	174	76
25	40	98	695	899	761	348	322	371	204	50	125	74
26	38	119	559	1,010	638	353	294	327	172	57	98	67
27	35	122	429	756	562	331	272	274	160	70	81	67
28	34	111	340	578	474	397	796	364	144	63	70	74
29	37	102	270	494	------	457	1,020	910	127	55	61	64
30	219	94	224	602	------	459	764	2,450	138	57	57	57
31	746	------	221	723	------	416	------	2,210	------	210	53	------
TOTAL	2,072	9,026	7,624	12,413	28,493	14,523	15,086	32,817	9,260	2,627	5,425	1,839
MEAN	66.8	301	246	400	1,018	468	503	1,059	309	84.7	175	61.3
MAX	746	817	1,330	1,010	2,030	1,020	1,200	4,050	1,230	210	584	127
MIN	30	94	51	158	300	279	216	274	127	50	53	42
CFSM	.30	1.35	1.10	1.79	4.57	2.10	2.26	4.75	1.39	.38	.78	.27
IN.	.35	1.51	1.27	2.07	4.75	2.42	2.52	5.47	1.54	.44	.90	.31

CAL YR 1970 TOTAL 89,737 MEAN 246 MAX 3,500 MIN 30 CFSM 1.10 IN 14.97
WTR YR 1971 TOTAL 141,205 MEAN 387 MAX 4,050 MIN 30 CFSM 1.74 IN 23.56

PEAK DISCHARGE (BASE, 2,200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 5	2230	7.24	2,940	5- 7	1400	8.60	4,520
2- 8	2230	6.67	2,370	5-30	2030	7.51	3,210
2-13	2230	7.67	3,400				

03176500 NEW RIVER AT GLEN LYN, VA.

LOCATION.--Lat 37°22'20", long 80°51'45", Giles County, on right bank at upstream side of bridge on U.S. Highway 460 at Glen Lyn, 0.3 mile upstream from East River, and 6.3 miles downstream from Wolf Creek.

DRAINAGE AREA.--3,768 sq mi.

PERIOD OF RECORD.--August 1927 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,490.24 ft above mean sea level. Aug. 11, 1927, to Oct. 16, 1934, on left bank just upstream from highway bridge at same datum, and Oct. 17, 1934, to June 16, 1939, on left bank 200 ft upstream from highway bridge at same datum.

AVERAGE DISCHARGE.--44 years, 4,826 cfs (17.39 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 27,200 cfs Feb. 14 (gage height, 9.31 ft); minimum, 1 160 cfs Oct. 5 (gage height, 3.12 ft); minimum daily, 1,280 cfs Oct. 5.

Period of record: Maximum discharge, 226,000 cfs Aug. 14, 1940 (gage height, 27.50 ft), from rating curve extended above 65,000 cfs on basis of slope-area measurement of peak flow; minimum, 730 cfs Jan. 30, 1966, result of freezeup; minimum daily, 820 cfs Sept. 8, 1930; minimum gage height, 2.10 ft Sept. 8, 1930.

REMARKS.--Records good. Flow regulated since 1939 by Claytor Reservoir 55 miles above station (see sta 03169000). Water-quality records for the current year are included in this report.

REVISIONS (WATER YEARS).--WSP 758: Drainage area. WSP 1305: 1928(M), 1930(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,700	10,000	2,150	3,130	3,600	4,060	4,560	6,210	10,800	5,050	10,000	2,150
2	1,820	8,690	2,220	2,100	5,180	5,690	5,520	4,770	9,840	4,260	3,810	2,040
3	1,770	8,070	2,070	2,090	4,260	7,420	5,430	4,560	7,900	3,540	5,710	2,510
4	1,370	7,470	2,650	2,050	3,600	10,500	2,410	4,740	7,370	2,290	3,400	3,170
5	1,280	6,950	2,800	5,510	5,000	9,320	2,150	4,220	7,170	1,810	4,210	1,900
6	1,640	5,540	1,830	5,800	10,500	9,930	6,050	3,510	3,880	1,840	6,340	1,590
7	1,860	4,300	1,650	5,530	13,300	8,270	8,100	12,500	2,730	4,270	5,680	1,440
8	1,950	3,110	2,180	5,770	11,200	5,980	10,500	19,600	5,400	3,690	4,040	2,330
9	1,780	1,960	1,910	5,100	16,200	7,000	8,580	15,500	4,410	4,130	3,060	1,950
10	1,700	3,180	1,930	2,340	13,900	5,370	8,120	12,100	4,310	4,210	5,300	1,930
11	1,390	6,080	2,030	1,930	9,320	5,930	6,980	8,100	5,530	2,150	4,850	3,540
12	1,390	4,780	2,160	3,250	6,010	5,270	5,950	7,340	5,460	1,730	3,750	1,770
13	1,820	5,370	2,320	2,980	10,300	5,560	5,480	11,800	2,470	2,790	3,550	4,520
14	2,630	5,130	1,760	2,940	22,900	5,170	5,090	17,000	2,190	4,470	4,460	3,460
15	2,850	4,840	2,300	3,340	15,300	3,570	4,450	14,300	4,550	3,640	2,490	3,760
16	2,620	3,050	2,560	3,530	10,800	5,680	4,200	14,500	5,640	3,390	2,180	3,600
17	1,940	4,070	2,710	2,790	9,910	4,830	4,210	7,990	7,600	3,110	2,610	1,820
18	1,450	3,630	2,430	2,290	8,180	4,730	2,350	9,830	6,920	2,080	2,510	2,380
19	1,330	3,110	2,960	3,120	8,390	4,370	2,030	9,150	5,270	1,580	2,500	1,560
20	1,800	2,930	2,660	3,240	8,630	5,890	2,900	7,910	3,820	2,780	2,600	3,300
21	1,730	3,330	1,740	2,970	8,810	4,370	3,160	9,130	2,760	2,620	3,130	6,080
22	2,970	2,230	6,560	3,340	10,400	2,170	3,200	9,150	5,610	3,270	1,840	6,750
23	2,420	2,800	6,880	3,810	11,200	4,470	2,940	5,970	6,930	3,210	1,980	6,770
24	3,500	4,280	6,250	3,080	10,100	4,420	2,920	4,400	9,000	3,490	2,720	5,550
25	2,140	3,590	5,480	7,030	9,290	4,490	2,360	5,820	8,690	1,800	2,750	4,870
26	1,490	3,120	4,400	7,740	8,910	4,090	2,110	5,560	6,960	2,080	2,810	2,360
27	2,110	1,630	5,510	8,080	8,960	4,020	3,280	5,020	5,440	2,750	2,470	1,940
28	1,820	2,570	2,780	7,010	5,290	2,490	3,970	4,630	2,090	3,950	2,880	3,140
29	1,920	1,970	3,980	6,630	------	2,680	5,580	7,200	5,250	2,670	1,800	2,690
30	4,470	1,680	3,120	4,790	------	5,380	5,250	16,800	4,640	3,060	1,530	2,560
31	11,400	------	2,650	3,070	------	4,750	------	18,800	------	5,560	2,110	------
TOTAL	72,060	129,460	94,639	126,380	269,440	167,870	139,830	288,110	170,630	97,270	109,070	93,430
MEAN	2,325	4,315	3,053	4,077	9,623	5,415	4,661	9,294	5,688	3,138	3,518	3,114
MAX	11,400	10,000	6,880	8,080	22,900	10,500	10,500	19,600	10,800	5,560	10,000	6,770
MIN	1,280	1,630	1,650	1,930	3,600	2,170	2,030	3,510	2,090	1,580	1,530	1,440
(*)	-80	+62	-70	-6	+37	+18	+13	+10	-94	-1	+109	-67
MEAN‡	2,245	4,377	2,983	4,071	9,660	5,433	4,674	9,304	5,594	3,137	3,627	3,047
CFSM‡	.60	1.16	.79	1.08	2.56	1.44	1.24	2.47	1.48	.83	.96	.81
IN.‡	.69	1.29	.91	1.24	2.67	1.66	1.38	2.85	1.65	.96	1.11	.90

CAL YR 1970 TOTAL 1,400,820 MEAN 3,838 MAX 26,300 MIN 1,170 MEAN‡ 3,825 CFSM‡ 1.02 IN.‡ 13.77
WTR YR 1971 TOTAL 1,758,180 MEAN 4,817 MAX 22,900 MIN 1,280 MEAN‡ 4,811 CFSM‡ 1.28 IN.‡ 17.31

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN CLAYTOR RESERVOIR; FURNISHED BY APPALACHIAN POWER CO.

‡ ADJUSTED FOR CHANGE IN CONTENTS.

03177700 BLUESTONE RIVER AT BLUEFIELD, VA.

LOCATION.--Lat 37°15'21", long 81°16'55", Tazewell County, on right bank 50 ft downstream from pump house and 1,000 ft upstream from outfall of sewage treatment plant at Bluefield, 0.9 mile downstream from Beaverpond Creek, and 3.5 miles upstream from Brush Fork.

DRAINAGE AREA.--39.8 sq mi.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Nonrecording gage. Altitude of gage is 2,350 ft (from topographic map).

AVERAGE DISCHARGE.--6 years, 45.8 cfs (15.63 inches per year).

EXTREMES.--Current year: Maximum discharge observed, 761 cfs May 6 (gage height, 6.24 ft); minimum observed, 7.0 cfs Oct. 19, 28 (gage height, 0.48 ft).

Period of record: Maximum discharge observed, 783 cfs Mar. 7, 1967 (gage height, 6.30 ft); minimum observed, 5.0 cfs Oct. 6, 1965, Dec. 3, 1969; minimum gage height, 0.38 ft Oct. 6, 1965, Oct. 1, 1969.

REMARKS.--Records good. Discharge figures herein do not include effluent from sewage treatment plant as some of it comes from another watershed.

COOPERATION.--Records computed and furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	44	18	32	86	56	43	72	149	26	148	18
2	10	34	19	30	64	60	44	77	119	23	69	16
3	9.8	82	18	29	56	86	42	82	92	21	97	17
4	9.4	60	16	35	258	86	39	60	74	24	60	17
5	9.1	56	16	60	460	77	37	56	65	20	52	17
6	8.4	48	18	68	347	77	52	336	60	21	49	17
7	8.0	39	16	56	207	95	100	670	55	20	42	16
8	8.0	36	15	48	341	90	175	444	49	20	36	16
9	8.4	35	15	44	264	92	224	275	46	18	29	16
10	9.0	46	15	42	184	68	166	182	42	28	26	15
11	9.1	109	15	40	136	68	124	146	41	31	41	15
12	8.8	77	22	36	119	64	100	134	108	25	36	17
13	8.4	64	18	33	212	60	82	260	56	21	27	19
14	8.0	48	16	56	224	56	72	274	65	19	24	23
15	9.4	42	16	64	160	56	64	212	46	20	22	18
16	8.4	38	16	60	136	52	56	200	49	27	20	19
17	8.0	31	17	56	148	44	52	146	39	18	18	17
18	8.4	29	16	52	154	44	48	124	35	23	17	17
19	8.0	26	16	44	136	44	43	106	39	23	18	56
20	9.1	32	16	41	136	44	40	92	37	22	16	18
21	10	29	104	39	124	42	64	58	40	18	17	21
22	9.8	27	144	37	124	40	66	83	49	18	70	17
23	9.0	27	133	68	114	52	68	78	39	17	74	15
24	8.4	24	100	70	100	48	56	65	34	16	39	15
25	8.0	22	86	114	86	48	52	70	29	17	32	15
26	8.0	22	68	100	82	48	48	56	27	23	26	17
27	7.7	21	56	77	72	44	44	56	26	19	22	16
28	7.4	20	48	64	64	48	168	60	25	17	22	14
29	18	20	39	60	------	52	118	78	28	26	21	13
30	38	20	37	116	------	48	90	306	24	100	20	14
31	48	------	36	109	------	44	------	232	------	90	18	------
TOTAL	347.8	1,208	1,184	1,780	4,594	1,823	2,379	5,128	1,588	808	1,208	538
MEAN	11.2	40.3	38.2	57.4	164	58.8	79.3	165	52.9	26.1	39.0	17.9
MAX	48	109	144	116	460	95	224	670	149	100	148	56
MIN	7.4	20	15	29	56	40	37	56	24	16	16	13
CFSM	.28	1.01	.96	1.44	4.12	1.48	1.99	4.15	1.33	.66	.98	.45
IN.	.33	1.13	1.11	1.66	4.29	1.70	2.22	4.79	1.48	.76	1.13	.50
*CFS	2.49	2.99	[illegible]	2.28	2.37	3.34	3.94	2.49	3.22	3.24	3.07	3.06

CAL YR 1970 TOTAL 15,878.7 MEAN 43.5 MAX 348 MIN 7.4 CFSM 1.09 IN 14.84 *CFS 2.71
WTR YR 1971 TOTAL 22,585.9 MEAN 61.9 MAX 670 MIN 7.4 CFSM 1.56 IN 21.11 *CFS 2.89

* SEWAGE TREATMENT PLANT EFFLUENT IN CUBIC FEET PER SECOND.

03207500 LEVISA FORK NEAR GRUNDY, VA.

LOCATION.--Lat 37°17'52", long 82°07'34", Buchanan County, on right bank 200 ft upstream from Six and Twenty Mile Creek, 1,000 ft upstream from wooden bridge to Appalachian Power Co. substation, 2.4 miles northwest of Grundy, 2.5 miles downstream from Slate Creek, and 3.0 miles upstream from Poplar Creek.

DRAINAGE AREA.--235 sq mi, includes that of Six and Twenty Mile Creek.

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 988.50 ft above mean sea level. Prior to Aug. 20, 1949, nonrecording gage at bridge 1,000 ft downstream at datum 2.33 ft lower. Aug. 20, 1949, to July 28, 1958, water-stage recorder at site 1,050 ft downstream at datum 2.33 ft lower, and July 29, 1958, to Aug. 1, 1961, at site 1,020 ft downstream at datum 4.33 ft lower.

AVERAGE DISCHARGE.--30 years, 273 cfs (15.78 inches per year).

EXTREMES.--Current year: Maximum discharge, 13,400 cfs May 6 (gage height, 11.92 ft), from rating curve extended as explained below; minimum, 11 cfs Oct. 20 (gage height, 0.67 ft).

Period of record: Maximum discharge, 33,200 cfs Jan. 29, 1957 (gage height, 19.06 ft, site and datum then in use), from rating curve extended above 4,400 cfs on basis of slope-area and contracted-opening measurements of peak flow; minimum observed, 0.2 cfs July 30, 1944; minimum gage height, 0.17 ft Sept. 27-29, 1964.

Flood in March 1929 reached a stage of 16.0 ft, site and datum in use prior to July 29, 1958 (discharge, 21,800 cfs), from information by local residents.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1305: 1947(M), 1949(M). WSP 1505: 1944-46(M), 1950(M), 1953(M), 1955(P), 1956(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	787	50	146	553	174	213	532	186	266	211	43
2	42	426	47	115	422	180	225	411	161	342	171	41
3	36	1,120	44	105	360	267	209	354	144	207	830	48
4	29	486	42	328	917	371	193	290	119	144	1,790	44
5	24	314	39	1,390	2,750	380	185	232	106	110	1,360	41
6	20	240	39	866	1,630	459	236	3,890	101	101	604	36
7	18	199	34	492	865	721	1,160	8,040	93	98	342	190
8	18	162	30	345	702	749	1,750	4,160	121	80	219	117
9	15	131	35	290	610	547	978	1,830	133	71	152	74
10	15	142	34	237	527	439	647	1,070	101	128	117	55
11	15	140	34	200	455	378	457	760	98	128	411	51
12	15	135	64	173	402	320	370	720	86	211	1,140	152
13	16	169	76	158	609	294	320	2,050	280	115	404	342
14	14	155	59	242	899	270	285	1,570	1,840	85	228	325
15	14	138	52	324	741	274	243	1,080	2,110	75	152	171
16	14	110	54	334	586	253	221	800	1,280	64	112	121
17	14	92	58	317	489	230	204	668	710	55	93	275
18	13	85	54	279	461	212	186	556	660	61	85	194
19	12	80	49	227	447	217	167	432	604	121	77	144
20	19	95	49	189	423	220	154	354	588	305	69	110
21	43	105	191	167	357	197	183	384	516	194	62	110
22	34	94	1,260	177	336	183	593	300	1,750	348	198	96
23	24	95	1,200	231	307	214	631	246	780	150	300	86
24	19	79	629	257	263	213	535	207	500	100	168	89
25	18	69	401	654	235	219	431	246	330	85	112	77
26	17	80	301	708	223	237	368	190	290	119	91	101
27	15	73	232	463	218	223	323	155	211	295	93	128
28	14	65	185	354	190	219	1,990	155	161	147	69	105
29	119	59	160	302	------	236	1,450	164	251	115	58	91
30	453	55	132	461	------	228	740	232	228	144	52	78
31	647	------	138	708	------	219	------	228	------	219	46	------
TOTAL	1,822	5,979	5,772	11,239	16,977	9,343	15,647	32,296	14,536	4,683	9,806	3,535
MEAN	58.8	199	186	363	606	301	522	1,042	485	151	316	118
MAX	647	1,120	1,260	1,390	2,750	749	1,990	8,040	2,110	348	1,790	342
MIN	12	55	30	105	190	174	154	155	86	55	46	36
CFSM	.25	.85	.79	1.54	2.58	1.28	2.22	4.43	2.06	.64	1.34	.50
IN.	.29	.95	.91	1.78	2.69	1.48	2.48	5.11	2.30	.74	1.55	.56

CAL YR 1970 TOTAL 82,323.9 MEAN 226 MAX 6,600 MIN 4.8 CFSM .96 IN 13.03
WTR YR 1971 TOTAL 131,635.0 MEAN 361 MAX 8,040 MIN 12 CFSM 1.54 IN 20.84

PEAK DISCHARGE (BASE, 3,500 CFS, REVISED).--MAY 6 (2200) 13,400 CFS (11.92 FT).

03207800 LEVISA FORK AT BIG ROCK, VA.

LOCATION.--Lat 37°21'13", long 82°11'45", Buchanan County, on left bank at Big Rock, 2,000 ft downstream from Rocklick Creek, and 2,500 ft downstream from bridge on State Highway 645.

DRAINAGE AREA.--297 sq mi.

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 866.37 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 14,900 cfs May 6 (gage height, 13.95 ft); minimum, 11 cfs Oct. 19 (gage height, 3.84 ft).

Period of record: Maximum discharge, 14,900 cfs May 6, 1971 (gage height, 13.95 ft); minimum, 5.0 cfs Oct. 1, 13, 14, 17, 18, 19, 20, 1969 (gage height, 3.65 ft).

Flood of Jan. 29, 1957, reached a stage of about 23.0 ft, information from local resident.

REMARKS.--Records good. Water-quality records for the current year are included in this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	770	61	158	627	217	254	609	205	273	239	55
2	51	506	55	148	476	209	273	498	181	370	205	54
3	42	1,250	52	124	434	309	255	445	166	247	602	61
4	35	584	50	543	1,190	431	227	375	137	188	1,790	58
5	29	395	47	1,980	3,190	442	217	328	119	150	1,360	54
6	24	300	46	1,050	2,040	521	281	4,410	110	132	566	54
7	21	240	42	571	1,010	834	1,500	7,650	117	134	365	198
8	20	184	37	415	756	870	2,270	3,950	150	110	251	159
9	18	146	40	352	689	626	1,220	2,000	150	90	191	98
10	16	164	42	288	599	521	723	1,080	112	180	150	72
11	17	180	41	239	536	460	542	712	110	190	235	59
12	17	164	79	207	483	397	454	650	100	280	1,150	175
13	16	210	102	177	711	366	400	2,660	495	160	420	340
14	16	180	80	286	1,120	338	361	1,890	2,300	130	260	355
15	16	157	68	408	862	348	304	1,170	2,690	110	188	215
16	14	130	68	411	669	340	274	800	1,500	85	145	184
17	14	110	72	386	578	304	247	602	712	74	122	310
18	13	100	68	342	545	273	222	485	736	79	107	243
19	13	96	61	274	532	274	195	405	752	159	98	188
20	22	106	60	215	511	276	176	350	584	310	90	147
21	52	121	145	189	443	244	201	365	506	205	81	142
22	48	108	1,500	211	415	220	620	300	1,730	360	184	129
23	34	110	1,530	277	389	259	658	260	840	191	350	119
24	26	94	731	311	338	252	586	227	518	132	208	127
25	21	76	484	682	297	262	492	255	380	110	147	105
26	21	96	373	775	276	286	427	212	340	145	140	159
27	18	90	281	528	272	270	380	178	269	345	127	198
28	16	78	226	418	233	262	2,170	175	223	195	96	153
29	123	70	181	355	------	285	1,900	178	287	159	77	127
30	536	65	154	523	------	276	893	223	291	184	71	107
31	632	------	140	792	------	263	------	231	------	239	59	------
TOTAL	2,008	6,880	6,916	13,635	20,221	11,235	18,722	33,673	16,810	5,716	10,074	4,445
MEAN	64.8	229	223	440	722	362	624	1,086	560	184	325	148
MAX	632	1,250	1,530	1,980	3,190	870	2,270	7,650	2,690	370	1,790	355
MIN	13	65	37	124	233	209	176	175	100	74	59	54
CFSM	.22	.77	.75	1.48	2.43	1.22	2.10	3.66	1.89	.62	1.09	.50
IN.	.25	.86	.87	1.71	2.53	1.41	2.34	4.22	2.11	.72	1.26	.56

CAL YR 1970 TOTAL 98,348.8 MEAN 269 MAX 6,690 MIN 8.1 CFSM .91 IN 12.32
WTR YR 1971 TOTAL 150,335.0 MEAN 412 MAX 7,650 MIN 13 CFSM 1.39 IN 18.83

PEAK DISCHARGE (BASE, 3,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5- 6	2300	13.95	14,900	6-15	0700	7.77	3,630

03208000 LEVISA FORK BELOW FISHTRAP DAM, NEAR MILLARD, KY.

LOCATION.--Lat 37°24'58", long 82°25'15", Pike County, on right bank 1.2 miles northeast of Millard, 1.4 miles upstream from Russell Fork, 1.8 miles downstream from Fishtrap Dam, and at mile 100.5.

DRAINAGE AREA.--393 sq mi.

PERIOD OF RECORD.--February 1938 to current year. Prior to April 1968, published as Levisa Fork at Fishtrap.

GAGE.--Water-stage recorder. Datum of gage is 659.96 ft above mean sea level (levels by Corps of Engineers). Prior to Apr. 19, 1968, nonrecording gage at site 4.7 miles upstream at different datum.

AVERAGE DISCHARGE.--33 years, 441 cfs (15.24 inches per year), unadjusted.

EXTREMES.--Current year: Maximum discharge, 6,830 cfs Jan. 6 (gage height, 21.51 ft); minimum daily, 15 cfs Dec. 4.

Period of record: Maximum discharge, 33,000 cfs Jan. 29, 1957 (gage height, 33.9 ft, from floodmark, site and datum then in use), from rating curve extended above 15,000 cfs on basis of slope-area measurement of peak flow; minimum observed, 0.1 cfs Nov. 8, 9, 1939, site then in use.

REMARKS.--Records fair. Flow regulated by Fishtrap Lake beginning October 1968. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 953: Drainage area. WSP 1335: 1938(M), 1939, 1940(M), 1942-43, 1944-45(M), 1946, 1948.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	304	950	39	159	1,020	324	145	886	280	384	312	46
2	312	871	16	159	548	264	53	656	396	396	372	53
3	316	1,180	16	156	564	328	53	388	308	488	408	54
4	312	1,160	15	284	1,490	488	53	84	217	352	1,550	54
5	296	280	16	1,430	3,250	552	53	84	170	206	1,800	54
6	260	703	16	3,920	2,940	612	50	1,220	166	195	756	56
7	260	472	16	1,890	1,630	1,100	47	25	149	192	540	73
8	256	408	16	842	1,030	1,580	51	499	118	166	400	184
9	206	404	16	1,060	1,030	1,010	49	2,370	118	121	288	246
10	206	408	16	950	794	679	46	3,500	118	121	224	242
11	206	404	16	624	766	612	46	3,480	145	115	231	238
12	145	404	17	372	684	528	46	3,440	159	292	799	288
13	41	404	17	288	818	468	45	2,050	564	256	823	751
14	149	404	17	384	1,370	468	46	2,160	2,700	177	444	978
15	199	400	17	496	1,310	400	45	3,930	3,880	135	260	698
16	199	396	17	640	990	368	45	4,040	2,470	105	156	532
17	199	356	17	620	799	368	46	3,950	1,110	84	94	656
18	195	280	16	560	718	368	46	3,850	876	86	94	536
19	192	249	16	424	718	368	45	3,730	1,600	110	94	472
20	184	145	16	320	698	368	45	2,790	967	268	96	516
21	184	63	20	235	624	352	46	1,250	722	336	86	592
22	184	63	217	332	556	308	49	504	1,530	308	89	572
23	181	63	1,260	392	524	288	91	217	1,490	396	253	472
24	181	61	1,390	392	496	288	332	312	785	276	324	448
25	181	61	818	556	416	288	790	368	576	142	328	376
26	181	60	604	1,040	320	440	742	368	604	107	235	444
27	174	60	380	756	360	396	372	372	456	224	135	520
28	159	60	300	496	356	288	1,960	324	296	348	135	484
29	224	60	231	393	------	288	2,500	224	436	346	138	428
30	866	60	159	560	------	288	1,160	228	508	260	142	420
31	962	------	159	978	------	288	------	246	------	210	107	------
TOTAL	7,914	10,889	5,886	21,708	26,819	14,765	9,097	47,545	23,914	7,204	11,713	11,483
MEAN	255	363	190	700	958	476	303	1,534	797	232	378	383
MAX	962	1,180	1,390	3,920	3,250	1,580	2,500	4,040	3,880	488	1,800	978
MIN	41	60	15	156	320	264	45	25	118	84	86	46
(*)	-175	-73.8	+80.4	-127	-7.6	+3.3	+454	+6.5	-5.5	+4.2	-5.0	-138
MEAN‡	80	289	270	573	950	479	757	1,540	792	236	373	245
CFSM‡	.20	.74	.69	1.46	2.42	1.22	1.93	3.92	2.02	.60	.95	.62
IN.‡	.23	.82	.79	1.68	2.52	1.41	2.15	4.52	2.25	.69	1.09	.69

CAL YR 1970 TOTAL 131,980 MEAN 362 MAX 4,600 MIN 15 MEAN‡ 340 CFSM‡ .86 IN.‡ 11.72
WTR YR 1971 TOTAL 198,937 MEAN 545 MAX 4,040 MIN 15 MEAN‡ 546 CFSM‡ 1.39 IN.‡ 18.85

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN FISHTRAP LAKE.
‡ ADJUSTED FOR CHANGE IN CONTENTS.

03208500 RUSSELL FORK AT HAYSI, VA.

LOCATION.--Lat 37°12'25", long 82°17'45", Dickenson County, on right bank 180 ft downstream from highway bridge at Haysi, and 700 ft downstream from McClure River.

DRAINAGE AREA.--286 sq mi.

PERIOD OF RECORD.--July 1926 to current year. Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 1,237.61 ft above mean sea level. Prior to Dec. 21, 1939, non-recording gage at highway bridge 180 ft upstream at same datum.

AVERAGE DISCHARGE.--45 years, 320 cfs (15.19 inches per year).

EXTREMES.--Current year: Maximum discharge, 14,400 cfs May 7 (gage height, 12.56 ft), from rating curve extended as explained below; minimum, 9.6 cfs Oct. 19, 20 (gage height, 1.61 ft).

Period of record: Maximum discharge, 46,600 cfs Jan. 29, 1957 (gage height, 23.17 ft), from rating curve extended above 12,200 cfs on basis of slope-area measurements at gage heights 13.1 and 23.17 ft; minimum observed, 0.2 cfs June 27, 28, 1936.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1003: 1926-43. WSP 1385: 1928(M), 1929, 1933(M), 1935(M), 1937-38(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	304	38	118	300	204	206	505	109	445	240	36
2	34	242	36	124	220	204	219	392	104	614	212	34
3	30	847	34	86	210	333	209	334	102	320	450	34
4	24	369	32	279	588	574	193	272	89	210	1,820	36
5	19	230	29	1,240	2,510	554	188	234	78	163	1,170	34
6	17	171	29	789	1,550	667	231	1,980	74	134	475	32
7	15	135	27	439	829	1,290	1,590	9,330	71	134	284	49
8	14	103	24	293	657	1,110	1,920	3,490	84	128	197	62
9	13	81	26	241	450	707	1,020	1,300	381	116	154	41
10	12	107	27	194	350	545	666	823	186	100	122	34
11	13	161	27	162	300	466	469	594	257	320	157	28
12	14	136	39	139	419	388	373	560	156	470	228	38
13	14	117	63	123	1,100	351	318	3,590	1,100	284	148	220
14	13	93	54	252	1,480	317	280	1,760	1,920	189	108	174
15	12	82	47	494	924	312	232	1,070	1,000	148	88	98
16	11	69	46	401	677	294	210	768	718	119	72	80
17	11	57	47	331	562	263	192	561	596	94	63	268
18	10	51	46	275	526	235	177	419	1,920	78	68	184
19	10	48	40	201	508	241	159	327	1,430	140	72	125
20	15	55	39	166	487	244	147	277	578	641	62	100
21	30	84	319	194	300	210	162	312	560	292	55	92
22	38	83	1,200	156	384	190	504	252	2,300	292	96	94
23	29	82	750	201	401	197	476	215	968	179	217	80
24	24	67	463	231	352	175	457	189	542	128	125	76
25	20	66	310	598	308	165	394	219	350	108	84	70
26	18	57	237	618	279	176	328	181	300	169	65	76
27	16	54	174	380	274	172	285	148	248	184	67	215
28	14	49	133	310	228	168	1,430	138	202	145	58	145
29	65	44	148	271	------	197	1,240	145	200	187	50	108
30	348	41	113	411	------	204	730	145	187	207	44	88
31	419	------	99	563	------	206	------	131	------	256	38	------
TOTAL	1,365	4,085	4,696	10,280	17,173	11,359	15,005	30,661	16,810	6,994	7,089	2,751
MEAN	44.0	136	151	332	613	366	500	989	560	226	229	91.7
MAX	419	847	1,200	1,240	2,510	1,290	1,920	9,330	2,300	641	1,820	268
MIN	10	41	24	86	210	165	147	131	71	78	38	28
CFSM	.15	.48	.53	1.16	2.14	1.28	1.75	3.46	1.96	.79	.80	.32
IN.	.18	.53	.61	1.34	2.23	1.48	1.95	3.99	2.19	.91	.92	.36

CAL YR 1970 TOTAL 85,934 MEAN 235 MAX 9,330 MIN 10 CFSM .82 IN 11.18
WTR YR 1971 TOTAL 128,268 MEAN 351 MAX 9,330 MIN 10 CFSM 1.23 IN 16.68

PEAK DISCHARGE (BASE, 4,500 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5- 7	1000	12.56	14,400	5-13	0500	7.46	5,640

03208700 NORTH FORK POUND RIVER AT POUND, VA.

LOCATION.--Lat 37°07'32", long 82°37'36", Wise County, on right bank at Pound, 700 ft downstream from Stacy Branch, 1,600 ft downstream from North Fork Pound River Dam, and 0.9 mile upstream from confluence with South Fork.

DRAINAGE AREA.--18.5 sq mi.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,500.00 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1965, on left bank at datum 44.88 ft higher.

AVERAGE DISCHARGE.--10 years, 26.9 cfs (19.75 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 404 cfs May 13 (gage height, 51.89 ft); minimum, 1.5 cfs Sept. 29 (gage height, 48.13 ft); minimum daily, 2.3 cfs Apr. 13.

Period of record: Maximum discharge, 4,480 cfs Mar. 12, 1963 (gage height, 61.58 ft, present datum), from rating curve extended above 650 cfs on basis of slope-area measurement of peak flow; minimum, 0.02 cfs Sept. 16, 1964, Aug. 11, 12, Oct. 28, Nov. 10, 1969; minimum daily, 0.04 cfs Sept. 15, 1964, Aug. 11, 1969; minimum gage height, 47.66 ft Sept. 16, 1964, present datum.

Flood of Jan. 29, 1957, reached a stage of about 63.9 ft, present datum, from Corps of Engineers floodmark.

REMARKS.--Records good. Flow regulated since August 1966 by North Fork Pound River Lake (see sta 03208680). Water-quality records have been collected at this location and are published in reports of the Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	30	16	13	61	14	6.3	27	4.2	45	59	3.0
2	11	25	11	13	42	13	3.1	34	4.4	110	63	3.0
3	12	55	8.2	13	34	22	2.6	32	4.3	54	49	3.0
4	12	48	4.5	54	63	25	2.5	19	4.2	24	136	3.0
5	12	39	3.0	141	228	25	2.5	15	4.1	17	126	2.9
6	12	32	3.0	122	179	40	3.9	112	4.0	12	41	2.8
7	12	35	3.0	45	112	80	11	101	4.3	9.2	27	3.1
8	12	24	3.0	30	77	83	11	143	4.7	8.9	22	3.0
9	14	22	3.0	31	36	54	6.7	340	4.4	7.1	16	2.9
10	20	31	2.8	21	24	45	4.2	284	11	6.5	14	2.8
11	17	29	2.8	13	24	38	3.0	108	31	18	14	2.8
12	12	24	3.7	13	29	32	2.4	75	18	53	10	3.8
13	11	26	3.7	13	42	21	2.3	122	18	52	4.3	24
14	13	26	3.5	20	36	16	2.5	182	33	33	4.0	8.9
15	16	26	4.5	46	33	27	6.8	277	45	17	4.0	3.2
16	16	26	9.9	51	42	45	8.9	142	43	7.4	3.6	7.1
17	11	26	14	42	45	57	8.7	45	49	7.4	3.1	16
18	9.5	31	13	40	51	49	8.6	34	65	7.4	3.2	12
19	9.5	30	8.4	35	53	32	11	21	43	10	3.1	11
20	14	30	8.5	24	47	29	13	15	29	15	3.0	10
21	21	34	116	16	37	20	13	14	20	12	3.0	10
22	17	33	224	13	37	18	13	14	45	9.2	6.1	9.8
23	15	27	173	22	37	26	13	14	120	9.2	8.9	9.8
24	15	23	100	52	33	32	13	14	64	9.2	7.8	9.7
25	15	18	56	124	25	35	13	18	21	9.2	4.7	9.5
26	15	13	46	114	25	35	13	13	22	9.2	3.7	13
27	15	12	25	58	22	22	13	9.0	23	9.2	3.7	31
28	15	12	18	35	17	14	106	8.7	23	9.2	3.1	38
29	35	12	18	21	------	13	94	8.7	25	9.8	3.0	30
30	164	16	18	51	------	13	45	8.6	16	24	3.0	15
31	98	------	13	76	------	13	------	6.7	------	39	3.0	------
TOTAL	678.1	815	936.5	1,362	1,491	988	457.0	2,256.7	802.6	663.1	655.3	,04.1
MEAN	21.9	27.2	30.2	43.9	53.3	31.9	15.2	72.8	26.8	21.4	21.1	10.1
MAX	164	55	224	141	228	83	106	340	120	110	136	38
MIN	7.1	12	2.8	13	17	13	2.3	6.7	4.0	6.5	3.0	2.8
(*)	-11	-8	0	+1	-1	+2	+20	-1	0	+1	-2	0
MEAN♦	10.9	19.2	30.2	44.9	52.3	33.9	35.2	71.8	26.8	22.4	19.1	10.1
CFSM♦	.59	1.04	1.63	2.43	2.83	1.83	1.90	3.88	1.45	1.21	1.03	.55
IN.♦	.68	1.16	1.88	2.80	2.95	2.11	2.12	4.47	1.62	1.40	1.19	.61

CAL YR 1970 TOTAL 9,610.3 MEAN 26.3 MAX 335 MIN 2.4 MEAN♦ 23.3 CFSM♦ 1.26 IN.♦ 16.79
WTR YR 1971 TOTAL 11,409.4 MEAN 31.3 MAX 340 MIN 2.3 MEAN♦ 31.3 CFSM♦ 1.69 IN.♦ 22.99

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN NORTH FORK POUND RIVER LAKE; FURNISHED BY CORPS OF ENGINEERS.

♦ ADJUSTED FOR CHANGE IN CONTENTS.

03208800 POUND RIVER ABOVE INDIAN CREEK, AT POUND, VA.

LOCATION.--Lat 37°07'26", long 82°36'29", Wise County, on left bank at Pound 1,600 ft downstream from confluence of North and South Forks, 2,400 ft upstream from bridge on U.S. Highway 23, and 3,800 ft upstream from Indian Creek.

DRAINAGE AREA.--36.7 sq mi.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,535.64 ft above mean sea level.

AVERAGE DISCHARGE.--6 years, 49.0 cfs (18.13 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 1,160 cfs May 7 (gage height, 9.58 ft); minimum, 6.1 cfs Sept. 11, 12 (gage height, 2.89 ft); minimum daily, 6.3 cfs Sept. 11.

Period of record: Maximum discharge, 2,520 cfs Mar. 7, 1967 (gage height, 15.67 ft); minimum, 0.40 cfs Oct. 6, 1965, July 4, 5, 1966; minimum daily, 0.50 cfs July 2-4, 1966; minimum gage height, 2.47 ft Aug. 18, 1967.

Floods of Jan. 29, 1957, and Mar. 12, 1963, reached stages of 25.7 and 21.2 ft, respectively, from information by local resident.

REMARKS.--Records good. Some regulation since August 1966 by North Fork Pound River Lake (see sta 03208680). Water-quality records have been collected at this location and are published in reports of the Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	60	26	29	101	37	33	61	15	53	91	.2
2	15	54	21	28	77	34	31	63	14	107	89	7.8
3	16	104	16	28	70	52	28	60	13	64	71	7.5
4	16	82	13	143	150	59	26	41	12	33	154	7.3
5	15	66	11	283	491	63	24	34	11	25	158	7.0
6	15	56	11	181	300	85	34	210	10	20	74	6.8
7	15	55	9.7	91	168	194	110	690	11	20	51	8.9
8	15	42	9.7	64	124	152	120	314	12	17	40	6.9
9	15	36	9.7	62	84	102	85	431	11	14	31	6.6
10	20	50	9.7	48	66	86	61	339	39	16	27	6.4
11	19	50	9.4	35	64	76	46	140	52	44	32	6.3
12	14	45	18	33	65	66	38	135	29	96	25	8.8
13	13	46	19	32	83	54	33	660	29	70	17	57
14	14	43	17	81	80	48	32	357	78	46	15	22
15	16	45	16	117	78	64	30	364	81	29	13	12
16	17	44	21	98	83	83	30	194	86	16	12	37
17	13	43	26	81	87	90	29	88	97	16	11	59
18	12	46	23	72	93	80	28	68	126	14	10	33
19	12	44	18	60	92	64	29	49	81	33	10	26
20	16	50	18	46	89	58	29	38	58	37	9.6	21
21	24	53	299	36	75	47	29	35	46	28	8.8	20
22	19	57	430	34	79	44	31	33	98	22	22	19
23	17	48	273	62	83	56	30	31	200	19	19	18
24	16	38	156	101	75	61	30	30	93	18	16	17
25	16	32	101	205	61	62	28	43	44	18	12	16
26	16	28	81	166	57	62	27	29	48	23	24	50
27	16	25	55	97	53	48	27	22	43	19	62	71
28	16	24	41	69	43	39	195	21	37	17	18	61
29	39	23	37	51	------	42	150	21	39	35	13	46
30	265	26	35	114	------	41	88	21	28	60	10	28
31	179	------	31	133	------	40	------	18	------	83	9.1	------
TOTAL	923	1,421	1,861.2	2,680	2,971	2,089	1,511	4,640	1,541	1,102	1,154.5	701.5
MEAN	29.8	47.4	60.0	86.5	106	67.4	50.4	150	51.4	35.5	37.2	23.4
MAX	265	104	430	283	491	194	195	690	200	107	158	71
MIN	12	23	9.4	28	43	34	24	18	10	14	8.8	6.3
(*)	-11	-8	0	+1	-1	+2	+20	-1	0	+1	-2	0
MEAN‡	18.8	39.4	60.0	87.5	105	69.4	70.4	149	51.4	36.5	35.2	23.4
CFSM‡	.51	1.07	1.63	2.38	2.86	1.89	1.92	4.06	1.40	.99	.96	.64
IN.‡	.59	1.19	1.88	2.74	2.98	2.18	2.14	4.68	1.56	1.14	1.11	.71

CAL YR 1970 TOTAL 18,736.7 MEAN 51.3 MAX 657 MIN 4.4 MEAN‡ 48.3 CFSM‡ 1.32 IN.‡ 17.69
WTR YR 1971 TOTAL 22,595.2 MEAN 61.9 MAX 690 MIN 6.3 MEAN‡ 61.9 CFSM‡ 1.69 IN.‡ 22.90

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN NORTH FORK POUND RIVER LAKE; FURNISHED BY CORPS OF ENGINEERS.

‡ ADJUSTED FOR CHANGE IN CONTENTS.

03208850 POUND RIVER BELOW BOLD CAMP CREEK, AT POUND, VA.

LOCATION.--Lat 37°07'19", long 82°35'55", Wise County, on left bank at Pound, 1,000 ft upstream from bridge on State Highway 83, 1,500 ft downstream from Bold Camp Creek, and 2,500 ft downstream from Indian Creek.

DRAINAGE AREA.--61.2 sq mi.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,527.36 ft above mean sea level.

AVERAGE DISCHARGE.--6 years, 80.1 cfs (17.77 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 2,110 cfs May 7 (gage height, 14.46 ft); minimum, 11 cfs Sept. 11, 12 (gage height, 3.48 ft); minimum daily, 12 cfs Sept. 10, 11.

Period of record: Maximum discharge, 4,570 cfs Mar. 7, 1967 (gage height, 21.51 ft); minimum, 1.0 cfs July 27, 28, 1966 (gage height, 3.04 ft); minimum daily, 1.3 cfs July 4, 27, 1966.

Floods of Jan. 29, 1957, and Mar. 12, 1963, reached stages of about 30.6 and 28.2 ft, respectively, from floodmarks.

REMARKS.--Records good. Some regulation since August 1966 by North Fork Pound River Lake 2.6 miles upstream (see sta 03208680).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	85	34	43	162	64	57	99	29	80	137	16
2	23	84	29	39	118	61	57	95	30	150	127	16
3	21	168	23	40	107	90	48	92	28	85	98	15
4	20	116	21	241	275	101	44	67	25	46	258	14
5	20	91	18	455	796	110	43	57	23	40	272	13
6	20	72	19	269	467	149	74	305	22	30	124	16
7	19	69	17	145	267	378	267	1,330	23	25	78	27
8	19	55	17	95	213	265	274	524	25	33	62	16
9	19	47	17	89	154	173	172	556	24	24	47	13
10	25	75	17	72	119	143	117	437	87	28	40	12
11	25	70	17	55	110	126	86	209	80	80	58	12
12	17	68	38	50	110	105	73	215	43	128	40	18
13	17	75	33	48	156	89	64	1,180	53	92	29	125
14	19	65	29	165	152	78	62	572	153	62	25	38
15	21	66	27	205	146	105	55	500	138	42	22	23
16	22	60	32	156	146	123	54	294	141	26	20	102
17	18	57	39	124	148	130	50	154	139	24	20	110
18	14	59	34	106	151	115	47	116	182	22	20	57
19	16	57	28	85	148	97	45	87	117	73	20	42
20	25	74	29	66	146	88	45	73	80	66	18	34
21	34	80	504	56	119	73	46	66	66	42	16	34
22	27	75	632	55	138	69	52	59	141	36	51	30
23	23	64	387	103	142	83	50	55	253	30	34	28
24	22	52	231	160	126	85	48	51	136	28	26	27
25	22	44	143	317	102	86	44	81	60	28	20	25
26	21	38	113	256	93	89	42	52	78	42	48	118
27	21	36	79	149	87	73	42	41	62	32	107	112
28	21	34	62	104	71	63	324	40	55	28	32	85
29	64	32	55	79	------	69	248	41	60	79	24	64
30	400	34	49	211	------	65	146	39	42	110	20	42
31	296	------	44	230	------	64	------	34	------	143	18	------
TOTAL	1,350	2,002	2,820	4,268	4,969	3,409	2,776	7,521	2,395	1,754	1,911	1,284
MEAN	43.5	66.7	91.0	138	177	110	92.5	243	79.8	56.6	61.6	42.8
MAX	400	168	632	455	796	378	324	1,330	253	150	272	125
MIN	16	32	17	39	71	61	42	34	22	22	16	12
(*)	-11	-8	0	+1	-1	+2	+20	-1	0	+1	-2	0
MEAN‡	32.5	58.7	91.0	139	176	112	112	242	79.8	57.6	59.6	42.8
CFSM‡	.53	.96	1.49	2.27	2.88	1.83	1.83	3.95	1.30	.94	.97	.70
IN.‡	.61	1.07	1.72	2.62	3.00	2.11	2.04	4.55	1.45	1.08	1.12	.78

CAL YR 1970 TOTAL 29,598.7 MEAN 81.1 MAX 1,240 MIN 7.9 MEAN‡ 78.1 CFSM‡ 1.28 IN.‡ 17.21
WTR YR 1971 TOTAL 36,459.0 MEAN 99.9 MAX 1,330 MIN 12 MEAN‡ 99.9 CFSM‡ 1.63 IN.‡ 22.15

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN NORTH FORK POUND RIVER LAKE; FURNISHED BY CORPS OF ENGINEERS.

‡ ADJUSTED FOR CHANGE IN CONTENTS.

03208900 POUND RIVER NEAR GEORGES FORK, VA.

LOCATION.--Lat 37°09'51", long 82°31'30", Dickenson County, on right bank 50 ft upstream from bridge on State Highway 624, 150 ft upstream from Camp Creek, and 2.6 miles northwest of the community of Georges Fork.

DRAINAGE AREA.--82.5 sq mi.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,470.39 ft above mean sea level.

AVERAGE DISCHARGE.--8 years, 108 cfs (17.78 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 3,000 cfs May 7 (gage height, 8.50 ft); minimum, 12 cfs Aug. 21, 22 Sept. 11, 12; minimum daily, 13 cfs Aug. 21, Sept. 11, 12; minimum gage height, 2.37 ft Sept. 11, 12.

Period of record: Maximum discharge, 6,870 cfs Mar. 7, 1967 (gage height, 12.06 ft); minimum, 1.6 cfs Sept. 17, 18, 1964 (gage height, 1.80 ft); minimum daily, 1.7 cfs Sept. 17, 1964.

Floods of Jan. 29, 1957, and Mar. 12, 1963, reached stages of 16.2 and 14.4 ft, respectively, from information by local residents.

REMARKS.--Records good. Some regulation since August 1966 by North Fork Pound River Lake 13 miles upstream (see sta 03208680).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	102	47	76	266	77	82	151	38	72	170	19
2	17	79	41	72	130	72	79	134	38	218	170	18
3	20	215	31	65	150	106	70	139	38	145	118	18
4	20	154	28	278	356	130	65	99	32	69	306	17
5	19	124	22	658	1,090	148	62	82	29	52	370	15
6	19	91	21	407	673	205	79	585	26	39	165	14
7	19	87	18	232	369	466	419	2,070	29	34	85	33
8	19	72	16	152	289	399	479	819	31	53	59	23
9	19	56	18	140	219	269	287	706	41	32	36	17
10	25	83	18	120	185	208	186	561	56	25	31	14
11	33	93	18	90	170	195	137	331	175	72	45	13
12	25	107	41	80	146	161	112	289	66	217	40	13
13	21	150	52	77	209	144	97	1,770	77	163	22	174
14	22	98	41	209	227	124	92	808	220	89	21	88
15	26	94	35	328	208	159	77	644	216	72	18	33
16	30	82	38	256	199	193	74	430	241	35	17	92
17	30	76	48	195	200	187	70	238	164	30	16	333
18	24	73	46	166	203	167	68	166	257	25	20	127
19	24	74	36	138	197	135	64	133	179	89	18	76
20	30	80	35	104	191	124	65	104	137	158	15	52
21	49	106	559	105	152	101	66	96	105	70	13	46
22	44	98	982	85	161	89	79	81	201	53	39	40
23	33	89	568	162	172	111	73	75	343	39	53	32
24	32	69	359	216	153	112	80	71	226	31	28	30
25	31	59	231	457	127	114	72	109	98	30	21	26
26	30	52	183	388	114	117	69	70	117	48	18	110
27	24	45	137	250	112	103	67	54	104	43	176	204
28	24	42	104	222	87	87	437	52	83	31	47	133
29	47	38	92	154	------	95	401	54	105	75	30	91
30	354	38	84	264	------	91	229	51	75	127	24	60
31	403	------	81	347	------	89	------	47	------	201	21	------
TOTAL	1,530	2,626	4,030	6,493	6,755	4,778	4,237	11,019	3,547	2,437	2,212	1,961
MEAN	49.4	87.5	130	209	241	154	141	355	118	78.6	71.4	65.4
MAX	403	215	982	658	1,090	466	479	2,070	343	218	370	333
MIN	17	38	16	65	87	72	62	47	26	25	13	13
(*)	-11	-8	0	+1	-1	+2	+20	-1	0	+1	-2	0
MEAN‡	38.4	79.5	130	210	240	156	161	354	118	79.6	69.4	65.4
CFSM‡	.47	.96	1.58	2.55	2.91	1.89	1.95	4.29	1.43	.96	.84	.79
IN.‡	.54	1.07	1.82	2.94	3.03	2.18	2.18	4.95	1.60	1.11	.97	.88

CAL YR 1970 TOTAL 37,703.9 MEAN 103 MAX 1,830 MIN 4.2 MEAN‡ 100 CFSM‡ 1.21 IN.‡ 16.45
WTR YR 1971 TOTAL 51,625.0 MEAN 141 MAX 2,070 MIN 13 MEAN‡ 141 CFSM‡ 1.71 IN.‡ 23.27

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN NORTH FORK POUND RIVER LAKE; FURNISHED BY CORPS OF ENGINEERS.

‡ ADJUSTED FOR CHANGE IN CONTENTS.

03208950 CRANES NEST RIVER NEAR CLINTWOOD, VA.

LOCATION.--Lat 37°07'26", long 82°26'20", Dickenson County, on left bank 500 ft downstream from Clinchfield Railway bridge, 1,000 ft downstream from Rush Creek, and 2.1 miles southeast of Clintwood.

DRAINAGE AREA.--66.5 sq mi.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,440.30 ft above mean sea level.

AVERAGE DISCHARGE.--8 years, 72.6 cfs (14.83 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,100 cfs May 7 (gage height, 12.30 ft); minimum, 2.5 cfs Oct. 10, 15 (gage height, 1.10 ft).

Period of record: Maximum discharge, 7,120 cfs Mar. 7, 1967 (gage height, 19.86 ft); minimum, 0.5 cfs Sept. 28, 1964 (gage height, 0.91 ft).

Flood of Jan. 29, 1957, reached a stage of about 20.0 feet.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	37	8.7	46	108	62	49	87	22	73	84	9.5
2	6.1	28	8.1	33	80	61	53	72	21	78	86	9.1
3	5.8	83	7.6	28	100	93	48	66	19	50	111	9.8
4	4.9	35	7.5	162	227	115	42	55	17	35	358	9.1
5	3.5	27	6.8	376	610	120	40	50	14	27	312	8.1
6	3.0	20	6.9	162	324	141	68	163	13	24	200	9.5
7	2.9	15	6.4	91	178	334	382	1,810	12	27	105	42
8	2.9	13	6.0	63	159	235	392	543	38	22	70	25
9	3.3	11	6.9	54	140	152	218	244	114	27	52	13
10	3.2	26	6.6	43	120	124	146	159	38	42	41	11
11	6.7	36	6.1	36	100	116	108	118	44	111	59	8.8
12	5.5	28	21	32	95	100	86	124	25	224	44	12
13	3.4	38	28	28	326	92	74	1,320	38	115	30	69
14	3.2	25	19	153	328	80	66	495	128	64	25	35
15	3.1	23	15	192	197	85	55	252	94	46	22	21
16	4.3	18	14	117	150	80	50	176	98	34	19	30
17	4.2	14	15	87	129	72	46	127	75	25	19	90
18	3.8	13	13	67	121	66	41	98	263	21	19	45
19	4.2	12	12	46	114	67	37	76	190	68	16	32
20	8.3	21	12	38	116	66	35	66	171	91	14	24
21	17	35	278	42	98	57	33	59	90	48	13	25
22	12	26	304	39	114	52	45	48	123	121	44	23
23	8.0	21	156	78	136	54	37	42	102	57	41	19
24	6.1	15	99	97	112	47	41	37	66	38	22	21
25	5.2	14	66	201	92	44	35	55	47	35	16	17
26	5.0	14	49	149	79	48	32	37	68	66	21	100
27	4.6	13	41	87	82	46	31	29	60	49	40	111
28	4.3	11	30	77	66	45	239	28	42	37	17	56
29	15	10	36	66	------	52	185	31	40	85	13	38
30	96	9.4	26	163	------	50	120	30	30	111	11	29
31	106	------	32	173	------	50	------	26	------	112	10	------
TOTAL	368.7	691.4	1,343.6	3,026	4,501	2,806	2,834	6,523	2,102	1,963	1,934	951.9
MEAN	11.9	23.0	43.3	97.6	161	90.5	94.5	210	70.1	63.3	62.4	31.7
MAX	106	83	304	376	610	334	392	1,810	263	224	358	111
MIN	2.9	9.4	6.0	28	66	44	31	26	12	21	10	8.1
CFSM	.18	.35	.65	1.47	2.42	1.36	1.42	3.16	1.05	.95	.94	.48
IN.	.21	.39	.75	1.69	2.52	1.57	1.59	3.65	1.18	1.10	1.08	.53

CAL YR 1970 TOTAL 21,669.6 MEAN 59.4 MAX 1,930 MIN 1.1 CFSM .89 IN 12.12
WTR YR 1971 TOTAL 29,044.6 MEAN 79.6 MAX 1,810 MIN 2.9 CFSM 1.20 IN 16.25

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5- 7	0900	12.30	3,100	8- 4	1800	8.25	1,480
5-13	0430	9.37	1,870				

03209000 POUND RIVER BELOW FLANNAGAN DAM, NEAR HAYSI, VA.

LOCATION.--Lat 37°13'43", long 82°20'36", Dickenson County, on right bank 1,100 ft upstream from Blacklog Branch, 2,000 ft downstream from John W. Flannagan Dam, 1.3 miles upstream from mouth, and 3.4 miles northwest of Haysi.

DRAINAGE AREA.--221 sq mi.

PERIOD OF RECORD.--July 1926 to current year. Prior to October 1960, published as Pound River near Haysi. Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 1,200.00 ft above mean sea level (Corps of Engineers bench mark). Prior to Dec. 20, 1939, nonrecording gage at site 3.8 miles upstream at different datum. Dec. 20, 1939, to Sept. 30, 1963, water-stage recorder at site 4.6 miles upstream at datum 79.91 ft higher.

AVERAGE DISCHARGE.--45 years, 265 cfs (16.28 inches per year), adjusted for storage since March 1965.

EXTREMES.--Current year: Maximum discharge, 3,840 cfs May 9 (gage height, 7.62 ft); minimum, 4.8 cfs Sept. 27 (gage height, 1.66 ft); minimum daily, 25 cfs Dec. 2.

Period of record: Maximum discharge, about 30,000 cfs Mar. 23, 1929 (gage height, 16.5 ft, from floodmarks, site and datum then in use); minimum, less than 0.1 cfs on several days in September 1932.

REMARKS.--Records good. Flow regulated since March 1965 by John W. Flannagan Reservoir 2,000 ft upstream (see sta 03208990) and since August 1966 by North Fork Pound River Lake 33 miles upstream (see sta 03208680). Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 953: 1940-41. WSP 1003: 1942, 1943(P). WSP 1275: 1927-30, 1931(M), 1932-39.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	614	77	146	522	212	101	656	114	596	426	44
2	42	457	25	146	336	218	47	385	91	654	331	47
3	43	323	65	146	336	255	51	321	77	357	436	49
4	43	257	95	397	565	333	48	248	79	191	1,009	49
5	44	137	94	1,390	2,230	333	47	187	79	104	1,400	49
6	43	228	93	1,150	2,040	388	47	475	79	47	998	49
7	39	92	93	639	821	1,010	49	187	58	70	419	49
8	40	143	117	238	686	949	48	875	51	82	272	49
9	40	124	132	238	590	788	47	3,380	183	83	195	49
10	40	193	131	238	424	452	48	3,620	309	83	124	49
11	40	245	131	221	313	384	49	3,010	222	112	125	49
12	40	245	131	122	360	386	48	1,410	222	329	129	49
13	40	303	132	95	757	354	46	458	259	436	132	179
14	40	339	131	321	1,170	299	46	1,960	492	291	132	301
15	41	306	132	838	738	300	46	3,520	700	170	100	165
16	41	245	131	545	525	302	47	2,190	556	131	76	119
17	41	245	132	460	525	384	47	1,110	333	58	57	556
18	41	208	131	327	525	385	47	456	522	58	49	403
19	41	191	131	268	438	309	47	330	452	97	49	235
20	41	193	132	178	446	309	47	294	454	361	49	145
21	41	194	132	140	405	271	47	219	333	241	49	108
22	40	229	905	140	374	194	49	219	399	205	49	109
23	40	245	1,410	270	374	194	49	130	697	180	49	109
24	40	242	860	409	376	258	49	61	736	116	52	94
25	40	224	402	883	347	265	49	161	384	101	57	63
26	40	182	313	827	292	222	49	201	197	105	57	63
27	40	182	162	520	292	222	49	139	197	182	227	140
28	239	182	72	323	264	222	50	111	198	110	258	412
29	390	182	93	242	------	222	603	112	136	125	121	347
30	547	126	130	447	------	222	982	114	173	318	79	338
31	615	------	146	737	------	222	------	114	------	377	52	------
TOTAL	2,893	7,067	6,861	13,041	17,071	10,864	2,979	26,653	8,782	6,370	7,539	4,467
MEAN	93.3	236	221	421	610	350	99.3	860	293	205	243	149
MAX	615	614	1,410	1,390	2,230	1,010	982	3,620	736	654	1,400	556
MIN	39	92	25	95	264	194	46	61	51	47	49	44
(*)	-40	-111	+3	-1	-5	+5	+307	-11	+7	-2	-7	-5
MEAN♦	53.3	125	224	420	605	355	406	849	300	203	236	144
CFSM♦	.24	.57	1.01	1.90	2.74	1.61	1.84	3.84	1.36	.92	1.07	.65
IN.♦	.28	.64	1.16	2.19	2.85	1.86	2.05	4.43	1.52	1.06	1.23	.72

CAL YR 1970 TOTAL 92,457 MEAN 253 MAX 3,910 MIN 25 MEAN♦ 216 CFSM♦ .98 IN.♦ 13.26
WTR YR 1971 TOTAL 114,587 MEAN 314 MAX 3,620 MIN 25 MEAN♦ 325 CFSM♦ 1.47 IN.♦ 19.99

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN NORTH FORK POUND RIVER LAKE AND JOHN W. FLANNAGAN RESERVOIR; FURNISHED BY CORPS OF ENGINEERS.

♦ ADJUSTED FOR CHANGE IN CONTENTS.

03209200 RUSSELL FORK AT BARTLICK, VA.

LOCATION.--Lat 37°14'45", long 82°19'25", Dickenson County, on left bank at Bartlick, just upstream from bridge on State Highway 611, 0.2 mile downstream from Pound River, and 1.1 miles upstream from Fall Branch.

DRAINAGE AREA.--526 sq mi.

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,165.00 ft above mean sea level.

AVERAGE DISCHARGE.--9 years, 600 cfs (15.49 inches per year), adjusted for storage.

EXTREMES.--Current year: Maximum discharge, 12,400 cfs May 7 (gage height, 15.49 ft), from rating curve extended as explained below; minimum, 48 cfs Oct. 19 (gage height, 6.75 ft); minimum daily, 51 cfs Oct. 10-12, 14.

Period of record: Maximum discharge, 47,000 cfs Mar. 12, 1963 (gage height, 24.83 ft), from rating curve extended above 11,000 cfs on basis of computation of peak flow over dam; minimum, 5.3 cfs Sept. 18, 1964 (gage height, 5.03 ft); minimum daily, 5.5 cfs Sept. 17, 1964.

Flood of Jan. 29, 1957, reached a stage of about 30 ft, from information by local resident.

REMARKS.--Records good. Flow regulated since March 1965 by John W. Flannagan Reservoir 1.9 miles upstream (see sta 03208990) and since August 1966 by North Fork Pound River Lake 35 miles upstream (see sta 03208680).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	1,000	119	248	945	425	332	1,230	241	1,100	639	85
2	82	803	65	236	654	432	293	811	210	1,430	530	84
3	77	1,300	92	235	676	579	288	692	188	725	820	84
4	69	800	117	681	1,230	898	266	551	170	435	2,520	87
5	64	375	112	2,870	4,730	881	260	453	155	294	2,760	85
6	61	408	110	2,110	3,830	1,060	304	2,720	148	199	1,600	81
7	55	230	109	1,150	1,810	2,490	1,910	8,570	120	217	733	99
8	53	256	131	563	1,440	2,300	2,400	4,530	185	225	486	102
9	52	215	149	500	1,330	1,600	1,250	4,550	588	208	363	89
10	51	293	151	452	1,020	1,020	781	4,610	502	179	280	84
11	51	401	151	392	821	866	570	3,920	473	437	300	76
12	51	391	172	274	800	787	474	2,190	377	779	400	92
13	52	430	201	232	1,990	724	411	4,390	1,370	715	299	429
14	51	434	193	592	2,980	636	365	3,890	2,880	480	258	487
15	55	399	193	1,410	1,840	631	312	4,750	2,080	318	209	268
16	54	322	179	988	1,270	616	287	3,230	1,540	280	154	203
17	54	307	182	814	1,110	651	267	1,850	1,080	200	127	803
18	53	267	180	623	1,070	629	247	944	2,580	160	125	596
19	53	246	172	479	959	558	224	709	2,160	300	130	368
20	60	255	169	338	943	563	207	618	1,170	1,200	125	254
21	75	286	419	289	825	494	236	574	997	600	115	205
22	85	316	2,370	314	773	400	678	509	2,780	540	170	209
23	74	333	2,320	485	786	406	617	390	1,910	400	300	193
24	68	320	1,420	653	739	436	579	286	1,430	300	200	176
25	64	279	741	1,590	668	435	504	410	808	240	170	126
26	62	244	566	1,570	583	406	432	413	558	310	150	147
27	61	241	356	955	577	402	377	315	499	355	320	364
28	320	235	209	631	501	396	1,760	277	432	255	350	565
29	550	227	225	512	-------	426	2,120	281	376	297	200	457
30	950	170	231	878	-------	434	1,860	283	373	502	140	423
31	1,150	-------	251	1,370	-------	434	-------	265	-------	603	100	-------
TOTAL	4,645	11,780	12,045	24,434	36,900	23,015	20,611	59,211	28,380	14,283	15,073	7,321
MEAN	150	393	389	788	1,318	742	687	1,910	946	461	486	244
MAX	1,150	1,300	2,370	2,870	4,730	2,490	2,400	8,570	2,880	1,430	2,760	803
MIN	51	170	65	232	501	396	207	265	120	160	100	76
(*)	-40	-111	+3	-1	-5	+5	+307	-11	+7	-2	-7	-5
MEAN+	110	282	392	787	1,313	747	994	1,899	953	459	479	239
CFSM+	.21	.54	.75	1.50	2.50	1.42	1.89	3.61	1.81	.87	.91	.45
IN.+	.24	.60	.86	1.73	2.60	1.64	2.11	4.16	2.02	1.00	1.05	.50

CAL YR 1970 TOTAL 185,529 MEAN 508 MAX 8,470 MIN 51 MEAN+ 471 CFSM+ .90 IN.+ 12.17
WTR YR 1971 TOTAL 257,698 MEAN 706 MAX 8,570 MIN 51 MEAN+ 717 CFSM+ 1.36 IN.+ 18.51

* CHANGE IN CONTENTS, EQUIVALENT IN CUBIC FEET PER SECOND, IN NORTH FORK POUND RIVER LAKE AND JOHN W. FLANNAGAN RESERVOIR; FURNISHED BY CORPS OF ENGINEERS.

+ ADJUSTED FOR CHANGE IN CONTENTS.

RESERVOIRS IN BIG SANDY RIVER BASIN, VA.

03208680 NORTH FORK POUND RIVER LAKE (formerly published as North Fork Pound Reservoir).--Lat 37°07'27", long 82°37'52", Wise County, in control tower of outlet tunnel for North Fork Pound River Lake at Pound, 1,200 ft upstream from Stacy Branch, and 1.2 miles upstream from South Fork Pound River. Drainage area, 17.2 sq mi. Period of record, July 1966 to current year. Gage, water-stage recorder. Datum of gage is at mean sea level (Corps of Engineers bench mark). Prior to Aug. 29, 1966, nonrecording gage at same site and datum. Extremes for current year: Maximum contents, 4,590 acre-ft May 8 (elevation, 1,619.06 ft); minimum, 1,950 acre-ft Dec. 9-11 (elevation, 1,601.52 ft). Extremes for period of record: Maximum contents, 4,610 acre-ft Apr. 30, 1970 (elevation, 1,619.13 ft); minimum (after initial filling for regular operation), 1,660 acre-ft Jan. 23, 1969 (elevation, 1,598.62 ft).

Reservoir is formed by rockfill dam. Spillway with crest at elevation 1,644.0 ft is in a saddle 350 ft southeast of dam. Except during major floods all discharge will be through a diversion tunnel, the invert of the entrance of which is at elevation 1,556.5 ft. Storage began in September 1964 during construction with peak discharge affected thereafter; initial filling for regular operation started July 13, 1966. Total capacity at elevation 1,644.0 ft (top of spillway) is 11,290 acre-ft of which 8,110 acre-ft is flood control storage for summer operations between elevations 1,611.0 (top of summer conservation pool) and 1,644.0 ft; an additional 1,290 acre-ft between elevations 1,601.0 (top of winter conservation pool) and 1,611.0 ft is available for flood control during the period December to March; contents at established minimum pool (1,601.0 ft) is 1,900 acre-ft; dead storage is 7 acre-ft below elevation 1,556.5 ft. Figures given herein represent total contents. Reservoir is used for flood control, low-water augmentation for water-quality control, and recreation. Capacity tables furnished by Corps of Engineers.

03208990 JOHN W. FLANNAGAN RESERVOIR.--Lat 37°14'00", long 82°20'56", Dickenson County, in control tower of outlet tunnel for John W. Flannagan Reservoir on Pound River, 1.3 miles upstream from Blacklog Branch, and 3.7 miles northwest of Haysi. Drainage area, 221 sq mi. Period of record, September 1964 to current year. Gage, water-stage recorder. Datum of gage is at mean sea level (Corps of Engineers bench mark). Prior to Mar. 31, 1965, nonrecording gage at same site and datum. Extremes for current year: Maximum contents, 85,000 acre-ft May 8 (elevation, 1,410.30 ft); minimum, 48,600 acre-ft Dec. 21 (elevation, 1,377.81 ft). Extremes for period of record: Maximum contents, 85,100 acre-ft Apr. 30, 1970 (elevation, 1,410.37 ft); minimum (after initial filling for regular operation), 11,800 acre-ft Apr. 1, 1965 (elevation, 1,313.42 ft).

Reservoir is formed by rockfill dam. Spillway with crest at elevation 1,410.0 ft is in a saddle 0.3 mile upstream from dam and is equipped with 6 radial gates 36 ft high by 42 ft wide. Except during major floods all discharge will be through a diversion tunnel, the invert of the entrance of which is at elevation 1,230.0 ft. Storage began in September 1961 during construction with peak discharge affected thereafter; initial filling for regular operations started in March 1965. Total capacity at elevation 1,446.0 ft (top of gates) is 145,700 acre-ft of which 78,600 acre-ft is controlled flood storage for summer operations between elevations 1,396.0 (top of summer conservation pool) and 1,446.0 ft; an additional 16,500 acre-ft between elevations 1,380.0 (top of winter conservation pool) and 1,396.0 ft is available for flood control during the period December to March; contents at established minimum pool (1,314.0 ft) is 12,000 acre-ft; dead storage is 300 acre-ft below elevation 1,230.0 ft. Figures given herein represent total contents. Reservoir is used for flood control, low-water augmentation for water-quality control, and recreation. Capacity table furnished by Corps of Engineers.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
	03208680 North Fork Pound River Lake			03208990 John W. Flannagan Reservoir		
Sept. 30	1,610.83	3,160	-	1,388.32	58,700	-
Oct. 31	1,606.08	2,490	-670	1,386.59	56,900	-1,800
Nov. 30	1,601.92	1,990	-500	1,380.27	50,800	-6,100
Dec. 31	1,601.82	1,980	-10	1,380.52	51,000	+200
CAL YR 1970	-	-	-2,490	-	-	-24,500
Jan. 31	1,602.14	2,020	+40	1,380.33	50,900	-100
Feb. 28	1,601.77	1,980	-40	1,380.13	50,700	-200
Mar. 31	1,602.65	2,080	+100	1,380.33	50,900	+200
Apr. 30	1,611.47	3,260	+1,180	1,396.78	68,000	+17,100
May 31	1,611.21	3,220	-40	1,396.30	67,400	-600
June 30	1,611.37	3,240	+20	1,396.64	67,800	+400
July 31	1,611.92	3,330	+90	1,396.46	67,600	-200
Aug. 31	1,611.23	3,220	-110	1,396.18	67,300	-300
Sept. 30	1,611.18	3,210	-10	1,395.91	67,000	-300
WTR YR 1971	-	-	+50	-	-	+8,300

03471500 SOUTH FORK HOLSTON RIVER AT RIVERSIDE, NEAR CHILHOWIE, VA.

LOCATION.--Lat 36°45'37", long 81°37'53", Smyth County, on right bank 400 ft upstream from highway bridge at Riverside, 900 ft upstream from Spring Branch, 3.2 miles downstream from Redstone Branch, 4 miles southeast of Chilhowie, and at mile 97.2.

DRAINAGE AREA.--76.1 sq mi.

PERIOD OF RECORD.--October 1920 to December 1931, July 1942 to current year. Monthly discharge only for some periods, published in WSP 1306. Prior to October 1924, published as "near Chilhowie". June 1907 to December 1909, at site 4.5 miles downstream also published as "near Chilhowie"; records not equivalent.

GAGE.--Water-stage recorder. Datum of gage is 2,106.77 ft above mean sea level. Prior to Nov. 14, 1931, nonrecording gage at site 400 ft downstream at same datum.

AVERAGE DISCHARGE.--40 years, 107 cfs (19.09 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,450 cfs May 7 (gage height, 5.15 ft); minimum, 17 cfs Oct. 19 (gage height, 1.22 ft).

Period of record: Maximum discharge, 6,000 cfs June 12, 1923 (gage height, 9.0 ft, from graph based on gage readings, site and datum then in use), from rating curve extended above 3,600 cfs; minimum recorded, 2 cfs Aug. 26, Oct. 15, 1943, Aug. 9, 11, 1944, Oct. 19, 1945, but may have been less in 1925 and 1926 before installation of water-stage recorder; minimum daily, 8 cfs July 19, 1926.

REMARKS.--Records good. Prior to August 1951, diurnal fluctuation at low flow caused by mill 500 ft above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1033: 1943-44(m). WSP 1306: Drainage area, 1921-31(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	51	28	56	130	112	110	154	300	110	273	48
2	20	42	28	51	110	110	106	132	220	100	198	47
3	21	45	29	49	100	124	98	121	173	92	171	47
4	21	44	28	50	110	172	90	106	144	84	172	45
5	21	42	28	86	325	176	84	96	125	78	147	45
6	20	40	27	96	428	171	94	122	112	76	238	47
7	19	39	26	90	332	179	123	1,010	104	73	275	45
8	19	37	26	79	466	169	173	772	111	69	186	47
9	20	33	26	74	480	150	204	491	108	66	139	43
10	20	42	27	68	304	140	185	330	93	169	146	42
11	20	78	26	62	232	130	157	250	86	165	525	43
12	20	77	30	57	192	119	136	207	82	260	246	43
13	20	97	30	54	278	114	122	276	88	196	172	47
14	19	81	27	61	365	108	112	288	138	143	132	45
15	19	68	26	71	275	108	102	267	149	117	109	42
16	19	57	27	90	218	106	94	317	135	102	96	40
17	19	50	30	80	187	103	89	302	132	91	88	40
18	19	46	31	68	181	100	83	248	113	84	86	43
19	19	43	30	60	183	109	77	204	118	83	82	43
20	20	43	31	58	213	120	74	173	267	81	74	43
21	24	42	73	56	227	117	73	158	241	72	69	45
22	25	38	175	58	235	113	87	135	320	68	72	42
23	22	37	202	267	294	130	81	122	265	63	81	41
24	21	34	211	299	246	132	92	112	358	60	68	39
25	21	47	160	261	196	127	89	108	248	60	64	39
26	20	33	121	229	165	123	86	99	195	67	60	39
27	20	32	93	173	144	111	83	93	156	61	57	39
28	20	31	80	161	124	111	197	120	129	58	55	38
29	23	31	70	113	------	121	253	320	112	59	53	36
30	53	29	63	150	------	121	192	440	119	74	51	36
31	71	------	60	137	------	118	------	449	------	336	50	------
TOTAL	715	1,409	1,869	3,314	6,740	3,944	3,546	8,022	4,941	3,217	4,235	1,279
MEAN	23.1	47.0	60.3	107	241	127	118	259	165	104	137	42.6
MAX	71	97	211	299	480	179	253	1,010	358	336	525	48
MIN	19	29	26	49	100	100	73	93	82	58	50	36
CFSM	.30	.62	.79	1.41	3.17	1.67	1.55	3.40	2.17	1.37	1.80	.56
IN.	.35	.69	.91	1.62	3.29	1.93	1.73	3.92	2.42	1.57	2.07	.63

CAL YR 1970 TOTAL 27,409 MEAN 75.1 MAX 912 MIN 18 CFSM .99 IN 13.40
WTR YR 1971 TOTAL 43,231 MEAN 118 MAX 1,010 MIN 19 CFSM 1.55 IN 21.13

PEAK DISCHARGE (BASE, 650 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
5- 7	1300	5.15	1,450	8-11	0100	4.31	1,000

03473000 SOUTH FORK HOLSTON RIVER AT VESTAL, VA.

LOCATION.--Lat 36°39'06", long 81°50'39", Washington County, on right bank 500 ft upstream from bridge on U.S. Highway 58 at Vestal, 0.7 mile downstream from Laurel Creek, 3.2 miles northwest of Damascus, 4.9 miles upstream from Middle Fork, and at mile 77.2.

DRAINAGE AREA.--301 sq mi.

PERIOD OF RECORD.--October 1931 to current year. Monthly discharge only for some periods, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 1,792.30 ft above mean sea level.

AVERAGE DISCHARGE.--40 years, 457 cfs (20.62 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,220 cfs May 7 (gage height, 9.30 ft); minimum, 73 cfs Oct. 9 (gage height, 2.22 ft).

Period of record: Maximum discharge, 15,100 cfs Jan. 29, 1957 (gage height, 15.35 ft), from rating curve extended above 10,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 30 cfs Oct. 14, 1941, Dec. 24, 1943 (gage height, 2.16 ft); minimum daily, 60 cfs Sept. 18, 1954, Sept. 26, 27, 1964.

REMARKS.--Records good. Some diurnal fluctuation caused by powerplant above station. In earlier years fluctuation was more marked but has been gradually reduced as mills upstream have gone out of operation. Water-quality records for the current year are included in this report.

REVISIONS (WATER YEARS).--WSP 823: Drainage area. WSP 1306: 1932-33(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	233	132	240	500	479	522	665	976	404	1,480	172
2	94	179	128	214	470	480	507	566	744	447	991	171
3	93	203	125	204	450	671	457	519	600	402	820	163
4	80	184	123	240	500	1,100	410	449	501	338	707	154
5	79	185	117	456	2,310	958	383	397	440	306	777	157
6	77	187	116	481	1,870	848	426	650	396	346	1,390	165
7	77	194	108	428	1,460	959	590	3,900	370	336	932	156
8	76	180	110	368	1,840	899	732	3,020	405	281	684	174
9	75	164	114	336	1,850	756	799	1,960	396	257	534	154
10	77	299	114	300	1,280	676	740	1,330	332	497	449	145
11	79	458	112	270	975	625	632	990	301	401	934	152
12	80	401	142	248	810	553	556	909	283	674	940	175
13	79	420	159	229	1,050	517	502	1,180	398	617	624	191
14	76	348	129	369	1,310	488	466	1,290	799	469	491	178
15	78	297	120	501	1,090	500	413	1,180	1,160	418	410	154
16	78	251	127	453	882	486	382	1,310	925	369	357	144
17	76	219	144	415	783	455	357	1,230	800	319	323	143
18	76	199	137	378	825	430	334	1,010	650	285	322	151
19	78	185	134	270	941	478	311	818	597	319	306	160
20	85	198	139	250	1,140	492	296	694	861	479	272	151
21	103	204	635	240	1,090	463	301	651	709	351	255	133
22	105	178	1,110	300	1,080	452	384	548	1,380	301	283	158
23	94	175	1,360	1,970	1,200	517	351	487	1,030	274	351	145
24	89	155	1,320	1,670	1,020	492	398	445	1,250	247	264	140
25	95	155	826	1,480	816	478	375	445	849	249	235	134
26	85	162	581	1,200	694	474	361	394	705	316	219	147
27	83	152	434	845	613	439	348	355	575	321	209	163
28	81	146	355	648	527	427	1,170	501	473	277	200	133
29	104	141	304	556	------	567	1,230	1,250	412	256	191	132
30	343	137	268	621	------	617	868	1,330	382	385	184	127
31	293	------	253	704	------	578	------	1,290	------	2,280	178	------
TOTAL	3,047	6,589	9,976	16,884	29,376	18,354	15,601	31,659	19,699	13,221	16,312	4,718
MEAN	98.3	220	322	545	1,049	592	520	1,021	657	426	526	157
MAX	343	458	1,360	1,970	2,310	1,100	1,230	3,900	1,380	2,280	1,480	191
MIN	75	137	108	204	450	427	296	355	283	247	178	127
CFSM	.33	.73	1.07	1.81	3.49	1.97	1.73	3.39	2.18	1.42	1.75	.52
IN.	.38	.81	1.23	2.09	3.63	2.27	1.93	3.91	2.43	1.63	2.02	.58

CAL YR 1970 TOTAL 124,697 MEAN 342 MAX 4,130 MIN 75 CFSM 1.14 IN 15.41
WTR YR 1971 TOTAL 185,436 MEAN 508 MAX 3,900 MIN 75 CFSM 1.69 IN 22.92

PEAK DISCHARGE (BASE, 3,000 CFS).--MAY 7 (1100) 5,220 CFS (9.30 FT).

03474000 MIDDLE FORK HOLSTON RIVER AT SEVENMILE FORD, VA.

LOCATION.--Lat 36°48'26", long 81°37'20", Smyth County, on right bank at downstream side of bridge on U.S. Highway 11 at Sevenmile Ford, 0.3 mile upstream from Meade Creek, 3.3 miles downstream from Walker Creek, and at mile 32.1.

DRAINAGE AREA.--132 sq mi.

PERIOD OF RECORD.--July 1942 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,960.00 ft above mean sea level.

AVERAGE DISCHARGE.--29 years, 155 cfs (15.95 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,500 cfs May 7 (gage height, 4.29 ft); minimum, 27 cfs Oct. 17 (gage height, 1.01 ft).
Period of record: Maximum discharge, 7,680 cfs Jan. 29, 1957 (gage height, 10.75 ft); minimum, 9 cfs Sept. 26, 1944; minimum daily, 20 cfs Sept. 26, 1944, Aug. 2, 1964.

REMARKS.--Records good. Some diurnal fluctuation at low flow caused by mill 9 miles above station. Since May 1936, flow occasionally regulated by the filling or draining of Hungry Mother Lake on Hungry Mother Creek (capacity, about 1,600 acre-ft). Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 973: 1942(m). WSP 1306: 1947(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	60	39	86	120	141	128	193	370	105	251	56
2	34	51	39	81	105	149	131	164	260	101	248	54
3	33	90	38	80	115	272	123	149	208	93	207	55
4	32	72	37	89	148	525	110	129	172	85	217	54
5	32	66	37	161	494	362	106	112	151	84	168	53
6	31	59	36	157	590	296	141	307	135	93	254	52
7	31	54	35	132	438	308	373	2,390	125	90	511	54
8	32	50	35	112	710	285	449	970	132	79	240	56
9	31	46	36	105	655	236	327	555	131	76	162	50
10	30	65	36	98	382	211	251	376	108	316	125	48
11	31	114	39	92	276	198	197	284	105	197	147	53
12	30	97	79	88	237	173	168	241	108	380	214	61
13	29	103	79	83	451	161	148	660	131	291	145	97
14	29	80	72	87	579	150	135	642	440	178	113	65
15	30	69	69	78	376	151	117	431	424	141	98	56
16	29	60	71	70	286	145	108	560	360	116	88	52
17	29	54	74	62	273	132	102	459	558	101	82	51
18	30	50	72	56	279	122	96	339	311	94	83	59
19	30	49	72	54	283	128	91	267	236	97	81	60
20	31	49	72	58	320	132	85	227	330	141	75	60
21	35	51	272	60	290	118	89	277	226	95	72	62
22	35	47	399	64	297	111	195	212	241	84	103	58
23	33	45	331	573	377	118	175	182	198	78	134	54
24	31	42	308	406	288	109	178	162	535	74	91	51
25	31	39	217	454	232	106	158	159	268	74	77	49
26	31	42	161	354	200	112	138	139	194	86	70	51
27	30	42	126	222	180	109	124	121	157	76	66	53
28	29	41	108	165	155	140	414	177	131	71	64	50
29	35	41	99	142	------	164	390	517	128	69	61	47
30	85	40	90	167	------	156	254	860	114	92	59	46
31	82	------	91	163	------	141	------	633	------	352	57	------
TOTAL	1,077	1,767	3,269	4,599	9,136	5,661	5,501	12,894	6,987	4,009	4,363	1,668
MEAN	34.7	58.9	105	148	326	183	183	416	233	129	141	55.6
MAX	85	114	399	573	710	525	449	2,390	558	380	511	97
MIN	29	39	35	54	105	106	85	112	105	69	57	46
CFSM	.26	.45	.80	1.12	2.47	1.39	1.39	3.15	1.77	.98	1.07	.42
IN.	.30	.50	.92	1.30	2.57	1.60	1.55	3.63	1.97	1.13	1.23	.47

CAL YR 1970 TOTAL 39,218 MEAN 107 MAX 1,330 MIN 29 CFSM .81 IN 11.05
WTR YR 1971 TOTAL 60,931 MEAN 167 MAX 2,390 MIN 29 CFSM 1.27 IN 17.17

PEAK DISCHARGE (BASE, 2,000 CFS).--MAY 7 (1000) 3,500 CFS (4.29 FT).

03478400 BEAVER CREEK NEAR BRISTOL, VA.

LOCATION.--Lat 36°37'54", long 82°08'02", Washington County, on right bank 50 ft upstream from bridge on State Highway 1405, 75 ft downstream from Goose Creek, 0.9 mile downstream from Clear Creek, 2.1 miles northeast of Bristol, and at mile 20.6.

DRAINAGE AREA.--27.7 sq mi.

PERIOD OF RECORD.--July 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,780.98 ft above mean sea level.

AVERAGE DISCHARGE.--14 years, 30.9 cfs (15.15 inches per year).

EXTREMES.--Current year: Maximum discharge, 462 cfs May 7 (gage height, 5.51 ft); minimum, 4.4 cfs Mar. 31 (gage height, 2.47 ft); minimum daily, 11 cfs Oct. 2, 4-9, 11, 12, 16-19, 23-26, Dec. 5-9.

Period of record: Maximum discharge, 1,090 cfs Apr. 28, 1970 (gage height, 8.11 ft); minimum, 3.4 cfs Dec. 30, 1963; minimum daily, 7.4 cfs Sept. 28, 29, Oct. 5, 15, 18, 19, 23, 24, 1969; minimum gage height, 2.47 ft Mar. 31, 1971.

Flood in 1936 reached a stage of about 12 ft.

REMARKS.--Records good. Small diurnal fluctuation at low flow caused by withdrawal of water, which is returned to stream 600 ft above station, for car-washing operation. Since September 1965, some regulation at high flow by flood-control reservoirs (capacity, 7,600 acre-ft). Water-quality records have been collected at this location and are published in reports of the Geological Survey.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	28	13	27	43	44	33	29	35	24	43	17
2	11	35	13	26	41	51	34	29	34	25	32	19
3	12	30	12	26	41	66	32	28	34	23	30	17
4	11	26	12	29	73	61	30	27	33	22	29	18
5	11	24	11	34	123	56	30	27	32	22	29	16
6	11	21	11	30	91	56	46	45	32	23	28	14
7	11	19	11	28	85	71	68	252	31	29	27	15
8	11	18	11	27	88	64	52	185	32	24	27	17
9	11	18	11	27	85	58	46	111	36	24	27	18
10	12	21	12	26	75	57	42	88	32	25	28	18
11	11	19	12	26	70	55	40	75	31	30	32	20
12	11	18	20	25	69	51	38	73	31	29	23	20
13	12	18	15	25	92	49	37	94	31	26	22	24
14	12	17	13	47	89	46	36	79	37	25	21	21
15	12	17	13	40	81	50	35	74	36	23	21	20
16	11	16	13	33	76	45	34	68	34	22	22	20
17	11	16	12	32	73	42	33	61	34	22	23	21
18	11	15	12	31	68	41	32	55	45	22	24	21
19	11	15	12	30	65	41	32	52	41	26	24	19
20	13	19	12	28	66	40	31	49	33	24	24	19
21	12	14	66	27	59	38	31	46	38	22	24	16
22	12	14	51	35	68	37	31	43	43	21	25	14
23	11	13	62	81	63	36	31	42	33	21	21	14
24	11	13	52	69	58	35	30	41	30	22	20	14
25	11	12	43	70	54	34	28	44	28	23	20	13
26	11	13	38	62	53	35	28	39	32	25	18	18
27	12	13	34	54	50	34	27	37	29	22	12	17
28	16	13	32	49	46	33	50	54	27	21	13	16
29	27	13	30	47	------	40	33	45	25	40	14	16
30	40	13	29	52	------	35	30	39	24	26	15	16
31	37	------	28	48	------	32	------	36	------	55	16	------
TOTAL	428	541	716	1,191	1,945	1,433	1,080	1,967	993	788	734	528
MEAN	13.8	18.0	23.1	38.4	69.5	46.2	36.0	63.5	33.1	25.4	23.7	17.6
MAX	40	35	66	81	123	71	68	252	45	55	43	24
MIN	11	12	11	25	41	32	27	27	24	21	12	13
CFSM	.50	.65	.83	1.39	2.51	1.67	1.30	2.29	1.19	.92	.86	.64
IN.	.57	.73	.96	1.60	2.61	1.92	1.45	2.64	1.33	1.06	.99	.71

CAL YR 1970 TOTAL 10,498 MEAN 28.8 MAX 442 MIN 11 CFSM 1.04 IN 14.10
WTR YR 1971 TOTAL 12,344 MEAN 33.8 MAX 252 MIN 11 CFSM 1.22 IN 16.58

03488000 NORTH FORK HOLSTON RIVER NEAR SALTVILLE, VA.

LOCATION.--Lat 36°53'48", long 81°44'47", Smyth County, on right bank 0.5 mile upstream from Cedar Branch bridge, 1.5 miles northeast of Saltville, 7.8 miles downstream from Laurel Creek, and at mile 84.6.

DRAINAGE AREA.--222 sq mi.

PERIOD OF RECORD.--June 1907 to December 1908 (published as "at Saltville"), October 1920 to current year. Monthly discharge only for some periods, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 1,703.53 ft above mean sea level. June 11, 1907, to Nov. 12, 1908, nonrecording gage on highway bridge 2.1 miles downstream at different datum. Nov. 2, 1920, to May 23, 1934, nonrecording gage on highway bridge 0.5 mile downstream at datum 7.74 ft lower.

AVERAGE DISCHARGE.--52 years, 288 cfs (17.62 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,460 cfs May 7 (gage height, 7.40 ft); minimum, 30 cfs Oct. 7-10, 14-17 (gage height, 0.44 ft).

Period of record: Maximum discharge, 16,500 cfs Jan. 29, 1957 (gage height, 13.20 ft), from rating curve extended above 7,200 cfs on basis of slope-area measurement of peak flow; minimum, 1.0 cfs Oct. 15, 16, 1947 (gage height, 0.13 ft), flow retarded by mine cave-in; minimum daily, 2.0 cfs Oct. 15, 1947.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 758: Drainage area. WSP 1113: 1944-47. WSP 1306: 1907(M), 1921-22(M), 1924-30(M), 1932-34(M), drainage area at site used 1907-8. WSP 1726: 1947, monthly and yearly runoff.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	347	72	163	350	297	258	410	562	150	298	53
2	38	241	69	135	300	289	255	340	403	136	346	52
3	36	362	68	134	280	397	251	308	329	116	336	52
4	33	302	67	134	310	642	222	269	272	99	264	53
5	32	237	64	310	1,700	592	206	231	232	88	247	52
6	31	198	62	366	2,000	519	218	356	204	89	800	50
7	30	179	58	318	1,200	676	414	4,960	181	92	554	54
8	30	158	54	263	1,000	679	626	2,640	172	87	357	55
9	30	134	61	236	1,250	540	589	1,250	175	78	244	52
10	30	135	59	210	1,000	452	509	765	148	101	176	48
11	31	355	59	181	700	418	405	556	132	92	216	47
12	31	357	79	159	600	368	345	450	124	109	357	69
13	31	305	122	142	700	348	304	1,160	148	109	241	106
14	30	251	113	162	900	333	274	1,590	763	84	164	109
15	30	209	98	245	800	319	239	932	834	75	126	85
16	30	172	93	305	650	310	214	816	513	71	104	67
17	31	142	94	305	600	276	196	716	448	65	92	62
18	31	124	94	281	550	253	179	573	356	62	87	68
19	32	113	90	226	550	248	161	457	289	68	88	74
20	35	111	89	179	570	262	147	391	336	98	82	80
21	41	120	312	181	600	236	146	404	291	101	74	81
22	45	110	1,680	196	650	217	310	339	346	72	86	73
23	47	100	988	898	750	224	319	294	327	63	174	69
24	43	92	1,140	1,030	800	213	339	263	267	58	121	71
25	39	71	782	1,210	600	202	321	248	218	58	87	77
26	37	93	518	990	432	212	285	225	188	68	75	68
27	36	88	364	624	391	209	256	186	166	77	69	76
28	35	82	288	400	332	241	696	221	138	70	63	73
29	40	79	234	380	------	292	900	439	133	67	60	63
30	200	76	195	385	------	301	551	895	144	76	57	58
31	316	------	178	440	------	280	------	891	------	236	55	------
TOTAL	1,522	5,343	8,244	11,188	20,565	10,845	10,135	23,575	8,839	2,815	6,100	1,996
MEAN	49.1	178	266	361	734	350	338	760	295	90.8	197	66.5
MAX	316	362	1,680	1,210	2,000	679	900	4,960	834	236	800	109
MIN	30	71	54	134	280	202	146	186	124	58	55	47
CFSM	.22	.80	1.20	1.63	3.31	1.58	1.52	3.42	1.33	.41	.89	.30
IN.	.26	.90	1.38	1.87	3.45	1.82	1.70	3.95	1.48	.47	1.02	.33

CAL YR 1970 TOTAL 79,284 MEAN 217 MAX 3,180 MIN 30 CFSM .98 IN 13.29
WTR YR 1971 TOTAL 111,167 MEAN 305 MAX 4,960 MIN 30 CFSM 1.37 IN 18.63

PEAK DISCHARGE (BASE, 3,000 CFS).--MAY 7 (1330) 6,460 CFS (7.40 FT).

03490000 NORTH FORK HOLSTON RIVER NEAR GATE CITY, VA.

LOCATION.--Lat 36°36'31", long 82°34'05", Scott County, on left bank 75 ft upstream from bridge on U.S. Highway 23, 1.6 miles downstream from Big Moccasin Creek, 2.1 miles southeast of Gate City, and at mile 8.8.

DR[illegible] AREA.--672 sq mi.

[illegible] OF RECORD.--October 1931 to current year. Monthly discharge only for some periods, published in WSP 1306.

[illegible].--Water-stage recorder. Datum of gage is 1,197.56 ft above mean sea level.

AVERAGE DISCHARGE.--40 years, 851 cfs (17.20 inches per year).

EXTREMES.--Current year: Maximum discharge, 21,200 cfs May 7 (gage height, 13.59 ft); minimum, 72 cfs Oct. 18, 19, 20 (gage height, 1.33 ft).

Period of record: Maximum discharge, 30,000 cfs Mar. 12, 1963 (gage height, 16.42 ft); maximum gage height, 16.73 ft Jan. 30, 1957; minimum discharge, 36 cfs Sept. 16, 17, 1964; minimum gage height, 1.00 ft Jan. 6, 1940.

REMARKS.--Records good. Prior to 1957, diurnal fluctuation at low flow caused by one or more mills above station. Water-quality records for the current year are included in this report.

REVISIONS (WATER YEARS).--WSP 783: 1932(M). WSP 823: Drainage area. WSP 1276: 1932-34.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	1,210	184	450	900	933	827	1,280	1,370	604	2,930	201
2	150	996	180	400	750	915	791	1,030	1,020	596	1,600	195
3	126	1,140	168	375	730	1,520	801	904	830	509	1,310	190
4	111	1,200	163	400	800	2,160	758	820	701	421	1,200	186
5	99	816	156	700	4,550	1,990	689	728	599	353	1,160	186
6	93	620	153	1,000	5,640	1,740	768	750	515	330	1,060	202
7	88	501	146	900	3,180	2,790	2,220	12,000	454	312	1,680	195
8	85	417	142	750	2,700	3,060	2,110	15,800	476	300	1,190	181
9	83	362	137	708	3,360	2,160	1,910	5,730	542	319	866	191
10	85	345	133	616	2,840	1,670	1,630	3,040	597	444	677	178
11	88	368	135	541	1,920	1,510	1,360	2,080	480	730	983	172
12	90	585	230	468	1,530	1,330	1,140	1,630	376	911	1,820	193
13	90	676	433	416	1,740	1,200	987	2,210	357	1,190	1,510	201
14	88	585	441	719	2,400	1,120	873	3,910	491	810	961	235
15	83	494	359	1,010	2,140	1,060	785	3,060	2,080	571	718	295
16	78	392	304	842	1,760	1,050	707	2,230	1,780	448	571	323
17	75	330	277	819	1,520	950	646	1,900	1,460	364	475	315
18	75	287	262	777	1,420	852	597	1,600	1,180	315	402	293
19	75	260	248	688	1,390	807	552	1,350	2,200	346	369	279
20	96	260	237	545	1,450	793	510	1,160	1,580	589	343	254
21	114	269	830	408	1,510	760	486	1,060	1,200	440	324	247
22	117	282	2,390	452	1,540	693	488	1,060	2,100	356	310	248
23	117	269	3,000	1,570	1,970	654	682	899	2,790	306	461	251
24	114	239	2,200	2,910	2,040	638	771	800	1,900	263	549	232
25	114	215	1,600	3,150	1,610	600	756	762	1,220	246	424	210
26	111	198	1,300	2,770	1,330	600	709	725	962	266	322	289
27	108	180	1,000	2,000	1,210	609	652	632	887	289	282	372
28	99	201	800	1,390	1,070	605	1,110	565	706	288	258	321
29	132	201	650	1,080	------	833	1,960	659	607	326	237	264
30	340	191	550	1,030	------	988	1,750	915	565	372	222	235
31	578	------	500	1,240	------	906	------	1,450	------	2,280	210	------
TOTAL	3,886	14,089	19,308	31,124	55,000	37,496	30,025	72,739	32,025	15,894	25,424	7,134
MEAN	125	470	623	1,004	1,964	1,210	1,001	2,346	1,068	513	820	238
MAX	578	1,210	3,000	3,150	5,640	3,060	2,220	15,800	2,790	2,280	2,930	372
MIN	75	180	133	375	730	600	486	565	357	246	210	172
CFSM	.19	.70	.93	1.49	2.92	1.80	1.49	3.49	1.59	.76	1.22	.35
IN.	.22	.78	1.07	1.72	3.04	2.08	1.66	4.03	1.77	.88	1.41	.39

CAL YR 1970 TOTAL 261,454 MEAN 716 MAX 13,900 MIN 75 CFSM 1.07 IN 14.47
WTR YR 1971 TOTAL 344,144 MEAN 943 MAX 15,800 MIN 75 CFSM 1.40 IN 19.05

PEAK DISCHARGE (BASE, 7,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 6	0100	7.75	7,170	5- 7	2200	13.59	21,200

03521500 CLINCH RIVER AT RICHLANDS, VA.

LOCATION.--Lat 37°05'10", long 81°46'52", Tazewell County, on right bank 1 mile southeast of Richlands, 1.6 miles downstream from Middle Creek, 2.2 miles upstream from Big Creek, and at mile 321.0.

DRAINAGE AREA.--139 sq mi.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for some periods, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 1,924.08 ft above mean sea level. Prior to Aug. 6, 1950, nonrecording gage at bridge 1.1 miles downstream at datum 6.53 ft lower.

AVERAGE DISCHARGE.--26 years, 180 cfs (17.59 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,360 cfs May 7 (gage height, 11.27 ft); minimum, 19 cfs Oct. 8-10, (gage height, 0.68 ft).

Period of record: Maximum discharge, 9,640 cfs Jan. 29, 1957 (gage height, 19.3 ft, from floodmark), from rating curve extended above 4,800 cfs on basis of contracted-opening measurement of peak flow; minimum, 3.2 cfs Sept. 8, 1955; minimum daily, 8.8 cfs July 6, Sept. 10, 16, 1964; minimum gage height, 0.45 ft July 2, 3, 1951.

Flood of June 22, 1901, reached a stage of 21.3 ft, present site and datum, from floodmark (discharge, 11,500 cfs), from report by Tennessee Valley Authority. Flood of Feb. 18, 1944, reached a stage of 13.7 ft, present site and datum, from floodmark (discharge, 5,500 cfs), from report by Tennessee Valley Authority.

REMARKS.--Records good. Prior to October 1970, diurnal fluctuation at low flow caused by mill 1.7 miles above station. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1306: 1946(M), 1948-50(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	410	44	89	293	140	123	265	283	1,050	408	39
2	31	186	40	83	219	143	129	221	213	322	213	47
3	28	536	39	80	199	214	130	208	182	199	192	39
4	25	292	39	132	477	294	116	187	152	150	191	40
5	24	191	37	497	1,580	264	111	159	134	125	193	37
6	23	168	35	319	1,090	295	128	382	123	110	148	39
7	21	142	33	216	585	464	317	3,770	114	102	118	53
8	20	113	33	167	543	471	586	2,410	122	92	97	59
9	19	92	32	147	635	343	532	1,140	115	97	83	45
10	19	92	34	130	438	283	393	654	99	120	72	42
11	21	134	36	114	346	255	291	455	94	99	115	39
12	22	160	48	103	297	220	235	364	95	97	124	56
13	22	149	69	94	328	204	202	675	129	81	81	82
14	21	126	55	164	420	191	186	905	942	73	68	93
15	21	109	47	241	366	181	162	646	1,010	71	61	69
16	22	92	44	239	316	169	148	517	618	67	56	55
17	22	78	46	207	312	149	136	397	471	62	52	61
18	21	70	46	179	358	137	129	316	295	68	51	52
19	22	64	43	139	336	136	121	259	290	86	51	55
20	24	64	43	119	315	140	115	224	343	135	48	52
21	27	70	321	119	270	131	132	225	301	90	46	55
22	30	61	918	109	249	126	264	189	842	101	87	54
23	28	58	506	285	256	136	241	169	466	73	149	52
24	26	54	349	328	219	137	237	155	342	63	83	50
25	24	74	245	558	196	134	206	153	235	64	62	47
26	25	50	194	458	181	138	184	139	199	77	54	52
27	24	48	152	282	175	135	168	124	171	82	50	62
28	22	48	126	213	152	133	770	138	143	68	46	53
29	28	46	114	197	------	140	605	180	139	64	43	46
30	112	45	97	312	------	135	369	342	577	96	41	43
31	583	------	91	457	------	128	------	435	------	344	40	------
TOTAL	1,393	3,820	3,954	6,691	11,141	6,146	7,466	16,976	9,239	4,316	3,113	1,567
MEAN	44.9	127	128	216	398	198	249	548	308	139	100	52.2
MAX	583	536	918	558	1,580	471	770	3,770	1,010	1,050	408	93
MIN	19	45	32	80	152	126	111	124	94	62	40	37
CFSM	.32	.91	.92	1.55	2.86	1.42	1.79	3.94	2.22	1.00	.72	.38
IN.	.37	1.02	1.06	1.79	2.98	1.64	2.00	4.54	2.47	1.16	.83	.42

CAL YR 1970 TOTAL 52,230 MEAN 143 MAX 2,240 MIN 19 CFSM 1.03 IN 13.98
WTR YR 1971 TOTAL 75,824 MEAN 208 MAX 3,770 MIN 19 CFSM 1.50 IN 20.29

PEAK DISCHARGE (BASE, 1,600 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 5	2030	6.38	1,840	6-30	2400	8.21	2,760
5- 7	0730	11.27	4,360				

03524000 CLINCH RIVER AT CLEVELAND, VA.

LOCATION.--Lat 36°56'41", long 82°09'18", Russell County, on right bank 500 ft upstream from highway bridge at Cleveland, 0.5 mile downstream from Muddy Hollow, 2.3 miles downstream from Weaver Creek, 4.4 miles downstream from Thompson Creek, and at mile 271.6.

DRAINAGE AREA.--528 sq mi.

PERIOD OF RECORD.--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 1,500.24 ft above mean sea level. Prior to Nov. 1, 1931, nonrecording gage on highway bridge 500 ft downstream at datum 1.0 ft lower.

AVERAGE DISCHARGE.--51 years, 689 cfs (17.72 inches per year).

EXTREMES.--Current year: Maximum discharge, 16,400 cfs May 7 (gage height, 18.82 ft), from rating curve extended as explained below; minimum, 58 cfs Oct. 19, 20 (gage height, 1.27 ft).
Period of record: Maximum discharge, 31,000 cfs Jan. 30, 1957 (gage height, 24.40 ft), from rating curve extended above 13,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 35 cfs Sept. 28, 1964; minimum gage height, 0.96 ft Feb. 10, 1934.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 823: Drainage area. WSP 1306: 1921-23(M), 1926(M), 1929-31(M). WSP 1706: 1927(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167	2,810	172	371	1,190	604	457	1,030	882	1,730	2,010	153
2	137	1,290	166	313	929	588	465	804	702	1,110	1,160	151
3	117	2,090	160	301	801	995	489	733	599	665	899	153
4	100	1,610	155	421	1,020	1,480	454	646	521	507	1,640	151
5	87	950	147	1,240	4,020	1,370	417	556	453	417	969	147
6	79	710	141	1,430	4,370	1,310	469	861	406	375	752	146
7	75	604	134	1,020	2,460	2,290	1,470	13,000	370	336	577	156
8	71	498	125	752	2,050	2,430	2,170	9,300	377	333	457	229
9	66	406	123	629	2,250	1,780	1,820	4,220	534	303	373	188
10	67	366	127	556	1,850	1,390	1,490	2,480	393	566	316	163
11	66	441	129	482	1,460	1,210	1,140	1,770	326	580	345	176
12	63	555	172	425	1,260	1,010	908	1,410	307	686	1,460	241
13	62	572	267	381	1,390	887	773	1,960	949	495	782	405
14	63	542	246	458	1,900	811	690	3,130	1,830	371	505	574
15	61	463	211	791	1,700	766	607	2,470	2,720	311	386	387
16	61	390	189	904	1,450	740	542	1,930	2,050	277	311	283
17	60	324	187	811	1,290	649	499	1,550	1,490	253	269	376
18	60	278	182	718	1,320	586	461	1,230	1,160	230	248	386
19	60	255	176	596	1,320	560	426	1,010	1,130	248	237	320
20	65	250	172	466	1,260	558	398	862	1,180	558	226	261
21	73	291	476	438	1,150	533	386	875	1,050	476	213	250
22	87	277	2,780	434	1,080	488	798	758	2,450	340	227	255
23	84	255	2,190	1,000	1,240	485	906	649	2,750	300	436	234
24	81	234	1,900	1,460	1,110	489	850	585	1,640	242	405	232
25	76	205	1,430	1,800	922	468	766	568	1,140	237	268	220
26	71	195	1,030	1,900	810	473	660	545	879	269	223	244
27	67	205	751	1,370	777	476	591	472	758	323	205	391
28	65	197	587	925	684	461	1,270	446	612	298	196	328
29	94	190	486	839	------	501	2,330	537	545	253	178	267
30	371	180	421	971	------	510	1,450	662	527	274	168	228
31	1,120	------	396	1,410	------	480	------	1,030	------	1,240	160	------
TOTAL	3,776	17,543	15,828	25,612	43,063	27,378	26,152	58,079	30,730	14,603	16,601	7,695
MEAN	122	585	511	826	1,538	883	872	1,874	1,024	471	536	257
MAX	1,120	2,810	2,780	1,900	4,370	2,430	2,330	13,000	2,750	1,730	2,010	574
MIN	60	180	123	301	694	461	386	446	307	230	160	146
CFSM	.23	1.11	.97	1.56	2.91	1.67	1.65	3.55	1.94	.89	1.02	.49
IN.	.27	1.24	1.12	1.80	3.03	1.93	1.84	4.09	2.17	1.03	1.17	.54

CAL YR 1970 TOTAL 203,501 MEAN 558 MAX 7,410 MIN 60 CFSM 1.06 IN 14.34
WTR YR 1971 TOTAL 287,060 MEAN 786 MAX 13,000 MIN 60 CFSM 1.49 IN 20.22

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 5	2330	9.47	5,470	5- 7	1500	18.82	16,400

03526000 Copper Creek near Gate City, Va.

LOCATION.--Lat 36°40'26", long 82°33'57", Scott County, on right bank at upstream side of highway bridge, 0.2 mile upstream from Plant Camp Creek, 1.1 miles downstream from Obeys Creek, and 2.6 miles northeast of Gate City.

DRAINAGE AREA.--106 sq mi.

PERIOD OF RECORD.--September 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,301.95 ft above mean sea level (Virginia Department of Highways bench mark). Prior to Aug. 30, 1953, nonrecording gage on highway bridge at same site and datum.

AVERAGE DISCHARGE.--24 years, 139 cfs (17.81 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,960 cfs May 7 (gage height, 10.82 ft); minimum, 22 cfs Oct. 5-10, 17 (gage height, 2.08 ft).

Period of record: Maximum discharge, 6,940 cfs Mar. 12, 1963 (gage height, 13.14 ft), from rating curve extended above 3,500 cfs; minimum, 3.6 cfs Jan. 15, 1956, result of freezeup; minimum daily, 10 cfs Jan. 9, 15, 1956; minimum gage height, 1.90 ft Dec. 5, 1969.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1143: 1948. WSP 1306: 1948-50(M). WSP 1556: 1951(M).

DISCHARGE, IN CUBIC FEET PER SECCND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	122	29	57	120	131	86	81	87	118	640	43
2	24	94	28	50	80	139	91	76	86	119	238	47
3	24	259	28	49	100	403	94	74	83	99	186	46
4	23	143	27	61	246	468	87	70	78	85	146	45
5	22	81	27	257	1,230	329	83	66	76	77	122	44
6	22	64	26	223	883	294	139	90	73	72	118	47
7	22	52	25	140	440	696	648	2,640	71	69	179	52
8	22	45	25	108	396	555	462	1,830	71	65	135	47
9	22	40	25	93	476	362	299	789	90	62	112	43
10	24	45	25	83	332	286	219	475	88	72	99	41
11	25	56	26	73	251	264	172	331	75	478	211	60
12	25	56	58	66	214	224	145	274	70	547	283	219
13	25	49	134	61	292	195	131	532	69	315	158	158
14	24	44	80	200	529	172	119	791	76	188	120	176
15	23	41	57	246	349	160	107	458	159	137	102	93
16	23	37	50	159	278	155	99	352	138	111	89	123
17	23	35	47	125	235	135	93	275	203	91	81	253
18	23	33	43	108	212	121	87	226	227	80	76	235
19	23	32	39	90	192	119	82	193	277	89	71	195
20	28	35	37	73	190	119	77	174	178	108	67	137
21	34	43	260	68	174	108	76	223	127	82	63	118
22	33	47	489	76	211	99	76	183	308	74	86	106
23	28	41	328	444	325	95	75	153	370	74	107	93
24	26	37	317	457	236	89	74	138	239	64	80	84
25	25	38	192	566	189	83	69	133	149	65	66	77
26	24	34	131	380	169	85	64	122	147	77	61	149
27	24	34	97	240	166	82	62	109	145	90	58	299
28	23	32	79	171	144	79	143	106	110	78	55	175
29	35	31	68	137	------	107	139	107	122	76	52	129
3C	133	30	61	145	------	106	94	101	109	76	50	139
31	132	------	59	176	------	93	------	94	------	330	49	------
TOTAL	990	1,730	2,917	5,182	8,659	6,353	4,192	11,266	4,101	4,068	3,960	3,439
MEAN	31.9	57.7	94.1	167	309	205	140	363	137	131	128	115
MAX	133	259	489	566	1,230	696	648	2,640	370	547	640	299
MIN	22	30	25	49	80	79	62	66	69	62	49	41
CFSM	.30	.54	.89	1.58	2.92	1.93	1.32	3.42	1.29	1.24	1.21	1.08
IN.	.35	.61	1.02	1.82	3.04	2.23	1.47	3.95	1.44	1.43	1.39	1.21

CAL YR 1970 TOTAL 44,695 MEAN 122 MAX 3,470 MIN 22 CFSM 1.15 IN 15.69
WTR YR 1971 TOTAL 56,857 MEAN 156 MAX 2,640 MIN 22 CFSM 1.47 IN 19.95

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 5	2230	7.59	1,630	7-11	0730	7.12	1,360
5- 7	1730	10.82	3,960				

03527000 CLINCH RIVER AT SPEERS FERRY, VA.

LOCATION.--Lat 36°38'55", long 82°45'02", Scott County, on right bank 200 ft downstream from bridge on U.S. Highway 58, 0.5 mile downstream from Copper Creek, 0.8 mile northwest of Speers Ferry, 1.8 miles south of Clinchport, and at mile 211.0.

DRAINAGE AREA.--1,126 sq mi.

PERIOD OF RECORD.--October 1920 to current year. Gage-height records collected in this vicinity February 1895 to July 1933 are contained in reports of the National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 1,196.52 ft above mean sea level. Prior to Nov. 23, 1926, nonrecording gage at site 400 ft upstream at datum 1.50 ft higher. Nov. 23, 1926, to Nov. 6, 1931, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--51 years, 1,557 cfs (18.78 inches per year).

EXTREMES.--Current year: Maximum discharge, 31,600 cfs May 8 (gage height, 23.61 ft); minimum, 121 cfs Oct. 16-19 (gage height, 1.34 ft).

Period of record: Maximum discharge, 46,800 cfs Mar. 12, 1963 (gage height, 29.93 ft); minimum, 42 cfs Sept. 29, Oct. 23, 1939; minimum daily, 77 cfs Oct. 7, 8, 14, 15, 22, 1930; minimum gage height, 0.82 ft Oct. 13, 1943.

Flood in February 1862 reached a stage of 33 ft, present site and datum, from reports by Tennessee Valley Authority.

Flood of Feb. 28, 1902, reached a stage of 26.6 ft, at site 400 ft upstream and at datum about 1 ft higher, from records of the National Weather Service.

REMARKS.--Records good. Prior to May 1951, diurnal fluctuation at low flow caused by mills above station. Water-quality records for the current year are included in this report.

REVISIONS (WATER YEARS).--WSP 823: Drainage area. WSP 1276: 1925(M), 1927, 1928-31(M), 1932, 1935(M). WSP 1306: 1922(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	402	2,530	356	780	2,410	1,660	1,120	2,120	1,420	1,340	3,480	337
2	299	3,160	335	700	1,850	1,570	1,120	1,670	1,270	2,750	3,020	297
3	252	2,750	319	670	1,670	2,140	1,160	1,460	1,100	1,680	2,130	299
4	212	3,470	311	900	1,930	3,460	1,140	1,320	960	1,210	2,050	289
5	185	2,170	294	2,000	6,600	3,360	1,090	1,180	840	955	2,210	284
6	169	1,450	280	3,000	10,000	3,050	1,140	1,160	749	810	1,850	277
7	156	1,140	272	2,600	6,440	5,780	3,140	17,800	681	735	2,100	370
8	149	970	263	2,080	4,560	6,160	4,590	28,400	635	683	1,480	415
9	142	814	252	1,620	4,770	4,490	4,250	11,700	1,110	643	1,140	388
10	140	787	246	1,370	4,230	3,360	3,250	5,940	1,060	817	932	360
11	140	957	246	1,180	3,290	2,980	2,600	4,040	843	2,220	868	439
12	141	985	785	1,030	2,750	2,620	2,090	3,200	739	4,280	1,370	600
13	142	998	1,510	917	2,690	2,330	1,770	4,760	673	2,840	2,130	950
14	137	991	1,150	1,410	3,840	2,080	1,550	6,950	1,590	1,670	1,370	1,600
15	131	916	868	2,460	3,740	1,920	1,380	5,730	3,420	1,210	1,020	1,200
16	124	792	712	2,420	3,180	1,850	1,240	4,230	3,540	954	810	900
17	121	684	627	2,110	2,730	1,660	1,130	3,360	3,290	786	681	1,050
18	121	593	558	1,790	2,500	1,480	1,040	2,740	4,360	673	595	1,100
19	122	525	502	1,500	2,450	1,380	960	2,250	3,570	670	540	950
20	136	505	463	1,230	2,460	1,370	882	1,890	2,710	1,130	502	800
21	169	638	1,700	980	2,400	1,290	835	2,030	2,280	1,170	468	720
22	189	709	4,990	938	2,460	1,210	840	1,760	4,180	1,110	514	740
23	189	672	5,570	2,290	3,300	1,150	1,220	1,480	5,490	955	655	730
24	175	594	4,480	3,760	3,020	1,110	1,340	1,310	4,010	762	743	690
25	168	506	3,480	4,840	2,490	1,070	1,260	1,250	2,560	667	714	650
26	159	447	2,520	4,610	2,080	1,050	1,160	1,240	1,960	848	547	700
27	153	414	1,840	3,520	2,020	1,050	1,050	1,090	1,850	1,060	451	1,100
28	146	407	1,300	2,500	1,870	1,030	1,470	978	1,500	1,050	398	950
29	167	395	1,100	1,840	------	1,140	3,030	973	1,320	998	373	800
30	828	375	900	1,790	------	1,210	3,040	1,030	1,460	1,080	350	700
31	1,380	------	850	2,230	------	1,180	------	1,140	------	1,520	327	------
TOTAL	7,144	32,344	39,079	61,065	93,730	67,190	51,887	126,181	61,130	39,276	35,818	20,534
MEAN	230	1,078	1,261	1,970	3,348	2,167	1,730	4,070	2,038	1,267	1,155	683
MAX	1,380	3,470	5,570	4,840	10,000	6,160	4,590	28,400	5,490	4,280	3,480	1,600
MIN	121	375	246	670	1,670	1,030	835	973	635	643	327	277
CFSM	.20	.96	1.12	1.75	2.97	1.92	1.54	3.61	1.81	1.13	1.03	.61
IN.	.24	1.07	1.29	2.02	3.10	2.22	1.71	4.17	2.02	1.30	1.18	.68

CAL YR 1970 TOTAL 468,139 MEAN 1,283 MAX 20,400 MIN 121 CFSM 1.14 IN 15.47
WTR YR 1971 TOTAL 635,348 MEAN 1,741 MAX 28,400 MIN 121 CFSM 1.55 IN 20.99

PEAK DISCHARGE (BASE, 10,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
2- 6	0600	12.85	11,000	5- 8	0630	23.61	31,600

03528000 CLINCH RIVER ABOVE TAZEWELL, TENN.

LOCATION.--Lat 36°25'30", long 83°23'54", Claiborne County, on right bank 0.4 mile upstream from Grissom Island, 4.6 miles downstream from Big War Creek, 10 miles east of Tazewell, and at mile 159.8.

DRAINAGE AREA.--1,474 sq mi.

PERIOD OF RECORD.--October 1918 to current year. Published as "near Lone Mountain" October 1918 to September 1927; as "near Tazewell" August 1927 to December 1936; and as "above Tazewell" July 1935 to current year. Prior to April 1919, monthly discharge only, published in WSP 1306. Gage-height record "near Tazewell" January 1937 to July 1941.

GAGE.--Water-stage recorder. Datum of gage is 1,060.7 ft above mean sea level. Apr. 1, 1919, to Sept. 30, 1927, nonrecording gage on railroad bridge 23.3 miles downstream at datum 102.7 ft lower. Aug. 8, 1927, to July 16, 1941, water-stage recorder at site 8.0 miles downstream at datum 47.2 ft lower. Water-stage recorder at present site and datum since July 29, 1935.

AVERAGE DISCHARGE.--53 years, 2,045 cfs (18.84 inches per year).

EXTREMES.--Current year: Maximum discharge, 36,100 cfs May 8 (gage height, 17.17 ft); minimum, 162 cfs Oct. 18, 19 (gage height, 0.55 ft).

Period of record: Maximum discharge, 56,700 cfs Mar. 13, 1963 (gage height, 22.27 ft); minimum, 108 cfs Sept. 11, 1925. Minimum gage height at present site and datum, 0.33 ft Sept. 20, 1955.

Maximum stage known, about 24 ft in 1862, present site and datum, from information by local resident.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 803: Drainage area at site "near Tazewell". WSP 1306: Drainage area at site "near Lone Mountain". WSP 1336: 1928.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	642	2,070	488	1,060	2,620	2,380	1,650	3,010	1,290	1,520	2,190	389
2	487	3,270	466	968	2,390	2,160	1,620	2,280	1,510	1,730	3,700	371
3	389	2,760	441	881	1,990	2,410	1,620	1,910	1,320	2,520	2,990	358
4	329	3,200	419	1,090	2,260	3,570	1,590	1,680	1,150	1,530	2,280	347
5	291	3,090	407	3,900	6,220	4,190	1,510	1,510	1,010	1,170	2,380	341
6	263	2,010	384	5,910	11,700	3,850	1,790	1,370	904	965	1,990	340
7	244	1,480	367	4,200	10,100	5,300	4,660	9,710	811	897	2,040	423
8	231	1,200	354	2,930	6,280	7,910	5,850	33,600	750	789	1,880	682
9	219	1,030	345	2,230	5,390	6,440	5,650	26,000	727	721	1,390	555
10	215	982	335	1,840	5,200	4,720	4,580	10,400	1,240	687	1,110	484
11	213	1,180	333	1,570	4,320	4,020	3,540	5,890	1,070	1,200	947	449
12	208	1,220	746	1,360	3,470	3,540	2,840	4,340	879	2,480	1,050	415
13	201	1,160	2,130	1,200	3,090	3,110	2,370	4,970	801	4,280	1,630	636
14	202	1,150	1,840	2,020	3,530	2,780	2,060	8,030	784	2,290	1,810	751
15	199	1,120	1,320	4,220	4,290	2,510	1,810	7,950	2,320	1,520	1,230	983
16	190	1,000	1,040	3,490	3,800	2,370	1,620	5,880	3,810	1,160	952	979
17	175	874	988	2,910	3,240	2,190	1,460	4,430	3,770	943	785	1,290
18	164	762	785	2,470	2,840	1,950	1,330	3,510	3,550	793	679	1,510
19	164	681	701	2,050	2,670	1,790	1,230	2,860	4,180	835	616	1,430
20	181	783	646	1,680	2,740	1,730	1,140	2,390	3,410	1,060	577	1,190
21	228	993	2,090	1,360	2,730	1,660	1,060	2,150	2,490	1,310	547	993
22	273	958	5,420	1,180	3,330	1,540	1,090	2,180	2,770	1,280	534	926
23	273	922	6,890	3,030	4,610	1,440	1,080	1,850	5,030	1,150	651	823
24	269	820	6,380	4,750	4,190	1,360	1,540	1,600	5,140	957	706	856
25	252	712	4,780	5,860	3,420	1,300	1,490	1,490	3,250	794	754	731
26	242	631	3,520	5,810	2,860	1,300	1,390	1,450	2,300	757	707	761
27	230	579	2,540	4,730	2,890	1,280	1,270	1,330	2,020	978	584	1,870
28	219	548	1,950	3,430	2,670	1,260	2,440	1,190	1,820	1,110	538	1,960
29	249	535	1,550	2,560	------	2,140	3,180	1,100	1,680	1,120	467	1,490
30	1,460	516	1,290	2,160	------	2,150	4,000	1,100	1,440	1,200	436	1,110
31	2,320	------	1,140	2,360	------	1,850	------	1,140	------	1,570	413	------
TOTAL	11,222	38,236	51,985	85,209	114,840	86,200	68,460	158,300	63,226	41,316	38,563	25,443
MEAN	362	1,275	1,677	2,749	4,101	2,781	2,282	5,106	2,108	1,333	1,244	848
MAX	2,320	3,270	6,890	5,910	11,700	7,910	5,850	33,600	5,140	4,280	3,700	1,960
MIN	164	516	333	881	1,990	1,260	1,060	1,100	727	687	413	340
CFSM	.25	.87	1.14	1.87	2.78	1.89	1.55	3.46	1.43	.90	.84	.58
IN.	.28	.96	1.31	2.15	2.90	2.18	1.73	4.00	1.60	1.04	.97	.64

CAL YR 1970 TOTAL 670,496 MEAN 1,837 MAX 36,300 MIN 164 CFSM 1.25 IN 16.92
WTR YR 1971 TOTAL 783,000 MEAN 2,145 MAX 33,600 MIN 164 CFSM 1.46 IN 19.76

PEAK DISCHARGE (BASE, 14,000 CFS).--MAY 8 (1615) 36,100 CFS (17.17 FT).

03531500 POWELL RIVER NEAR JONESVILLE, VA.

LOCATION.--Lat 36°39'43", long 83°05'42", Lee County, on right bank 175 ft downstream from highway bridge, 2 miles southeast of Jonesville, 10 miles upstream from Wallen Creek, and at mile 143.1.

DRAINAGE AREA.--319 sq mi.

PERIOD OF RECORD.--October 1931 to current year. Monthly discharge only for some periods, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 1,259.08 ft above mean sea level.

AVERAGE DISCHARGE.--40 years, 514 cfs (21.88 inches per year).

EXTREMES.--Current year: Maximum discharge, 11,900 cfs May 7 (gage height, 19.94 ft); minimum, 44 cfs Oct. 19, 20 (gage height, 1.23 ft).

Period of record: Maximum discharge, 31,100 cfs Mar. 12, 1963 (gage height, 33.36 ft), from rating curve extended above 20,000 cfs; minimum, 17 cfs Sept. 19, 20, 1954, and as result of storage behind temporary dam, Oct. 18, 1961; minimum gage height, 0.68 ft Oct. 18, 1961.

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 823: Drainage area. WSP 1033: 1932-44. WSP 1436: 1946(M), 1948(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	647	163	316	671	539	411	425	210	184	1,230	139
2	93	362	156	271	545	548	436	365	206	254	971	135
3	81	533	149	255	528	757	457	352	220	207	893	131
4	70	517	142	450	757	1,020	423	314	197	168	1,840	99
5	62	458	137	3,120	3,420	935	402	282	182	148	1,230	95
6	56	371	131	1,900	3,380	883	461	296	173	135	1,750	93
7	52	314	126	1,090	1,720	1,810	1,240	7,180	169	191	1,030	636
8	50	274	117	764	1,280	1,940	1,460	6,800	169	211	677	767
9	48	240	115	618	1,150	1,250	1,250	2,640	180	186	483	295
10	50	284	117	516	873	965	967	1,550	192	160	384	195
11	52	532	118	429	752	935	718	1,080	171	1,140	397	159
12	54	441	563	375	671	805	586	959	204	2,610	1,140	142
13	54	369	1,080	336	644	739	503	3,660	178	2,010	677	323
14	49	304	603	1,320	637	678	442	3,990	191	781	432	448
15	48	295	423	2,300	577	637	383	2,040	316	504	310	247
16	47	268	345	1,370	535	660	345	1,380	316	374	251	199
17	47	238	346	987	490	578	318	1,010	449	290	216	437
18	45	225	301	774	472	520	294	788	574	236	196	423
19	45	212	265	595	457	502	273	630	391	263	184	340
20	48	250	249	460	514	520	256	528	321	776	175	273
21	72	469	1,710	389	545	461	245	451	323	460	161	237
22	123	416	4,660	388	739	419	247	388	1,450	443	169	224
23	99	356	2,300	1,630	1,480	420	240	343	799	356	249	196
24	77	293	1,690	1,640	1,130	410	245	312	486	272	201	233
25	65	230	1,180	2,360	840	388	229	342	338	244	159	193
26	60	222	864	1,780	673	385	211	371	272	700	142	785
27	56	207	625	1,160	690	374	204	276	283	1,000	153	1,620
28	53	195	493	826	591	342	519	253	248	696	138	926
29	65	183	404	664	------	410	739	248	241	713	122	533
30	1,420	172	349	721	------	449	534	247	208	1,040	114	395
31	2,070	------	322	842	------	433	------	227	------	1,660	109	------
TOTAL	5,321	9,877	20,243	30,646	26,761	21,712	15,038	39,718	9,657	18,412	16,183	10,663
MEAN	172	329	653	989	956	700	501	1,281	322	594	522	355
MAX	2,070	647	4,660	3,120	3,420	1,940	1,460	7,180	1,450	2,610	1,840	1,620
MIN	45	172	115	255	457	342	204	227	169	135	109	93
CFSM	.54	1.03	2.05	3.10	3.00	2.19	1.57	4.02	1.01	1.86	1.64	1.11
IN.	.62	1.15	2.36	3.57	3.12	2.53	1.75	4.63	1.13	2.15	1.89	1.24

CAL YR 1970 TOTAL 171,357 MEAN 469 MAX 8,270 MIN 34 CFSM 1.47 IN 19.98
WTR YR 1971 TOTAL 224,231 MEAN 614 MAX 7,180 MIN 45 CFSM 1.92 IN 26.15

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-22	0330	12.18	6,370	5- 7	2000	19.94	11,900
2- 5	2030	10.76	5,440	5-13	2300	10.92	5,550

03532000 POWELL RIVER NEAR ARTHUR, TENN.

LOCATION.--Lat 36°32'30", long 83°37'49", Claiborne County, on left bank 500 ft upstream from bridge on U.S. Highway 25E, 2.3 miles east of Arthur, 2.4 miles downstream from Indian Creek, and at mile 65.4.

DRAINAGE AREA.--685 sq mi.

PERIOD OF RECORD.--October 1919 to current year. Gage-height records collected at same site December 1892 to August 1893, September 1904 to March 1925 are in reports of the National Weather Service and were published as "near Tazewell".

GAGE.--Water-stage recorder. Datum of gage is 1,043.84 ft above mean sea level (Tennessee River Survey datum). Prior to July 23, 1927, nonrecording gage, and July 23, 1927, to Sept. 30, 1970, water-stage recorder, at same site at datum 2.00 ft higher.

AVERAGE DISCHARGE.--52 years, 1,120 cfs (22.20 inches per year).

EXTREMES.--Current year: Maximum discharge, 15,900 cfs May 8 (gage height, 19.11 ft); minimum, 139 cfs Oct. 18, 19, 20.

Period of record: Maximum discharge, 33,000 cfs Jan. 9, 1946 (gage height, 29.15 ft present datum, from floodmark), from rating curve extended above 27,000 cfs on basis of slope-area measurement of peak flow; minimum, 47 cfs Jan. 6, 1940, result of freezeup; minimum daily, 60 cfs Sept. 23, 1955; minimum gage height, 1.51 ft present datum Oct. 24, 1969 (result of dredging).

Flood of Jan. 29, 1918, reached a stage of 27.2 ft present datum (discharge, 33,000 cfs).

REMARKS.--Records good. Water-quality records have been collected at this location and are published in reports of the Geological Survey.

REVISIONS (WATER YEARS).--WSP 1336: 1920, 1921(M), 1923.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	392	3,050	356	725	1,400	1,170	989	1,110	503	498	1,990	227
2	312	1,400	336	665	1,180	1,100	971	907	491	415	1,680	220
3	272	967	316	595	1,000	1,250	974	787	483	416	1,850	220
4	237	940	297	967	1,120	1,630	957	713	455	446	1,590	211
5	217	1,050	276	2,430	3,470	1,820	886	651	430	360	2,170	204
6	201	984	265	4,480	6,110	1,740	1,120	800	392	311	1,650	201
7	189	820	248	2,920	5,300	1,850	2,860	4,870	366	329	1,920	211
8	177	690	234	1,920	3,140	2,640	3,020	13,000	391	515	1,390	344
9	168	595	227	1,490	2,380	2,740	2,700	11,100	374	422	1,010	1,180
10	168	640	214	1,240	2,010	2,060	2,210	4,580	401	372	805	618
11	171	725	217	1,060	1,650	1,870	1,770	2,800	370	336	690	432
12	192	907	573	901	1,470	1,780	1,450	2,970	344	877	640	340
13	168	845	1,190	795	1,440	1,610	1,240	5,180	351	2,280	1,150	286
14	183	730	1,650	1,590	1,360	1,490	1,090	6,560	369	2,150	962	269
15	192	675	1,090	3,780	1,270	1,520	960	5,850	459	1,040	710	586
16	171	604	830	3,850	1,150	1,480	857	3,470	507	720	577	460
17	151	564	710	2,500	1,070	1,380	779	2,470	596	564	492	372
18	139	591	645	1,920	979	1,210	719	1,920	786	465	428	424
19	139	460	595	1,560	924	1,130	661	1,580	859	456	392	622
20	156	591	523	1,240	944	1,070	614	1,330	765	555	364	550
21	204	870	1,520	1,010	977	1,040	578	1,140	628	1,040	348	474
22	237	967	4,770	901	1,150	938	570	997	665	750	344	408
23	224	880	6,870	1,930	1,730	861	562	883	1,510	591	400	376
24	272	755	4,570	3,460	2,280	820	549	800	1,180	577	505	352
25	237	631	3,190	4,000	1,850	796	516	782	777	483	456	316
26	201	541	2,250	4,200	1,520	786	488	751	602	470	356	348
27	180	465	1,690	3,110	1,370	762	457	759	506	755	304	604
28	165	446	1,320	2,170	1,310	744	1,390	637	506	1,290	283	1,690
29	227	416	1,070	1,680	------	1,100	1,570	584	598	1,100	293	1,040
30	1,220	384	805	1,450	------	1,170	1,430	553	801	1,180	265	720
31	2,910	------	795	1,370	------	1,080	------	539	------	1,540	241	------
TOTAL	10,072	24,095	39,722	61,909	51,554	42,637	34,937	80,873	17,387	23,231	26,255	14,305
MEAN	325	803	1,281	1,997	1,841	1,375	1,165	2,609	580	749	847	477
MAX	2,910	3,050	6,870	4,480	6,110	2,740	3,020	13,000	1,510	2,280	2,170	1,690
MIN	139	384	214	595	924	744	457	539	344	311	241	201
CFSM	.47	1.17	1.87	2.92	2.69	2.01	1.70	3.81	.85	1.09	1.24	.70
IN.	.55	1.31	2.16	3.36	2.80	2.32	1.90	4.39	.94	1.26	1.43	.78

CAL YR 1970 TOTAL 406,098 MEAN 1,113 MAX 28,600 MIN 115 CFSM 1.62 IN 22.05
WTR YR 1971 TOTAL 426,977 MEAN 1,170 MAX 13,000 MIN 139 CFSM 1.71 IN 23.19

PEAK DISCHARGE (BASE, 9,000 CFS).--MAY 8 (2130) 15,900 CFS (19.11 FT).

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in floodflow analyses. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in the following table. Discharge measurements made at miscellaneous sites are given in a second table.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
		POTOMAC RIVER BASIN					
01620800	Briery Branch tributary near Spring Creek, Va.	Lat 38°26'45", long 79°06'15", Rockingham County, at culvert on State Highway 257, 4.9 miles northwest of Spring Creek.	-	1966-71	5-30-71	2.97	(*)
01621000	Dry River at Rawley Springs, Va.	Lat 38°30'10", long 79°03'14", Rockingham County, at bridge on State Highway 847, at Rawley Springs.	72.6	1947-48* 1949-71	5-30-71	5.05	2,760
01621200	War Branch near Hinton, Va.	Lat 38°28'28", long 78°59'14", Rockingham County, at bridge on U.S. Highway 33, 1 mile west of Hinton.	9.45	1949-71	6-23-71	4.03	835
01621450	Blacks Run tributary near Harrisonburg, Va.	Lat 38°23'30", long 78°55'05", Rockingham County, at culvert on U.S. Highway 11, 4.9 miles southwest of Harrisonburg.	.72	1966-71	2-13-71	5.95	38
01622100	North River tributary near Mount Crawford, Va.	Lat 38°19'55", long 78°56'20", Rockingham County, at culvert on U.S. Highway 11, 1.7 miles south of Mount Crawford.	1.55	1966-71	2-13-71	4.47	74
01622300	Buffalo Branch tributary near Augusta Springs, Va.	Lat 38°09'42", long 79°16'08", Augusta County, at culvert on State Highway 42, 5.0 miles northeast of Augusta Springs.	.55	1967-71	5-30-71	3.60	47
01622400	Buffalo Branch tributary near Christian, Va.	Lat 38°11'55", long 79°13'10", Augusta County, at culvert on State Highway 42, 1.3 miles north of Christian.	.49	1967-71	5-30-71	3.45	45
01627300	South River tributary near Harriston, Va.	Lat 38°12'10", long 78°50'10", Augusta County, at culvert on U.S. Highway 340, 1.1 miles south of Harriston.	2.41	1966-71	5-30-71	5.79	(*)
01628600	Cub Run tributary at Montevideo, Va.	Lat 38°22'15", long 78°47'00", Rockingham County, at culvert on U.S. Highway 33, 1.0 mile northwest of Montevideo.	.42	1966-71	5-30-71	4.40	66
01629400	South Fork Shenandoah River tributary near Luray, Va.	Lat 38°38'35", long 78°33'20", Page County, at culvert on U.S. Highway 211, 5.5 miles southwest of Luray.	.54	1966-71	2-13-71	4.45	36
01632300	Long Meadow near Broadway, Va.	Lat 38°34'43", long 78°45'40", Rockingham County, at bridge on State Highway 259, 3 miles southeast of Broadway.	8.15	1950-71	2-13-71	4.66	(*)
01632950	Crooked Run tributary near Conicville, Va.	Lat 38°47'55", long 78°43'25", Shenandoah County, at culvert on State Highway 42, 2.7 miles southwest of Conicville.	.31	1966-71	2-13-71	4.10	22

See footnotes at end of table, p. 214.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
POTOMAC RIVER BASIN--Continued							
01633500	Stony Creek at Columbia Furnace, Va.	Lat 38°51'55", long 78°37'45", Shenandoah County, at foot bridge 0.8 mile south of Columbia Furnace.	79.4	1948-56‡ 1957-71	2-13-71	5.55	2,140
01633700	Pugh Run tributary near Columbia Furnace, Va.	Lat 38°51'17", long 78°31'22", Shenandoah County, at culvert on State Highway 623, 7 miles northeast of Columbia Furnace.	.56	1966-71	7-29-71	4.54	(*)
01635200	North Fork Shenandoah River tributary near Waterlick, Va.	Lat 38°58'25", long 78°18'30", Warren County, at culvert on State Highway 55, 1.3 miles west of Waterlick.	.48	1966-71	5-30-71	3.89	29
01644100	South Fork Sycolin Creek near Leesburg, Va.	Lat 39°04'15", long 77°36'35", Loudoun County, at culvert on U.S. Highway 15, 3.9 miles southwest of Leesburg.	2.05	1966-71	9-11-71	6.25	358
01644200	Lenah Run at Lenah, Va.	Lat 38°57'06", long 77°34'37", Loudoun County, at bridge on U.S. Highway 50 at Lenah.	1.09	1962-71	5-30-71	3.01	(*)
01644250	South Fork Broad Run near Arcola, Va.	Lat 38°56'30", long 77°33'05", Loudoun County, at culvert on U.S. Highway 50, 1.2 miles southwest of Arcola.	4.12	1966-71	11- 4-70	6.60	295
01646200	Scott Run near McLean, Va.	Lat 38°57'32", long 77°12'21", Fairfax County, on left bank at bridge on Old Georgetown Pike, 0.8 mile upstream from mouth, and 2.3 miles northwest of McLean.	4.69	1961-71	7-29-71	23.2	1,740
01652400	Long Branch at Arlington, Va.	Lat 38°51'31", long 77°07'37", Fairfax County, on right bank at South Carlyn Springs Road, 500 ft downstream from Arlington County line, 1.8 miles southeast of Seven Corners.	.94	1963-71	5-13-71	21.31	575
01652430	Doctors Run at Arlington, Va.	Lat 38°51'42", long 77°06'09", Arlington County, at 8th Street, 0.6 mile west of Glebe Road, Arlington.	.90	1966-71	5-13-71	3.81	460
01652470	Lucky Run at Arlington, Va.	Lat 38°50'33", long 77°06'16", Arlington County, at Dinwiddie Street and Walter Reed Drive, Arlington.	1.22	1966-71	7-29-71	3.60	340
01652500	Fourmile Run at Alexandria, Va.	Lat 38°50'36", long 77°04'46", Alexandria City, on left bank 100 feet upstream from East Glebe Road, 2.1 miles upstream from mouth.	14.2	1951-69‡ 1970-71	7- 9-70 7-29-71	10.7 6.90	8,800 4,300
01656200	Broad Run near Warrenton, Va.	Lat 38°48'25", long 77°48'47", Fauquier County, at bridge on State Highway 17, 7 miles north of Warrenton.	2.94	1950-71	2-13-71	6.12	145
01656600	Broad Run tributary at Buckland, Va.	Lat 38°46'50", long 77°40'15", Prince William County, at culvert on U.S. Highway 29, 0.2 mile east of Buckland.	.79	1966-71	2-13-71	5.62	88
01656800	Cub Run near Chantilly, Va.	Lat 38°54'30", long 77°28'01", Fairfax County, on left bank at downstream side of bridge at U.S. Highway 50, 0.2 mile upstream from unnamed tributary, 2.2 miles northwest of Chantilly.	7.13	1963-68, 1970-71	7-10-70 11- 5-70	4.85 5.27	275 390
01656940	Cub Run near Centreville, Va.	Lat 38°49'59", long 77°27'50", Fairfax County, at bridge on U.S. Highways 29 & 211, 0.4 mile upstream from Big Rocky Run, and 1.9 miles west of Centreville.	39.6	1970-71	7-10-70 2-14-71	9.27 11.44	980 2,300
RAPPAHANNOCK RIVER BASIN							
01662300	Thornton River tributary near Thornton Gap, Va.	Lat 38°40'08", long 78°17'30", Rappahannock County, at culvert on U.S. Highway 211, 1.8 miles east of Thornton Gap.	1.38	1967-71	9-12-71	8.34	64

See footnotes at end of table, p. 214.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
		RAPPAHANNOCK RIVER BASIN--Continued					
01662600	Rush River tributary near Washington, Va.	Lat 38°41'40", long 78°10'10", Rappahannock County, at culvert on U.S. Highways 211 & 522, 1.2 miles southwest of Washington.	0.09	1966-71	11-12-70	3.80	24
01664800	Harpers Run near Morrisville, Va.	Lat 38°31'00", long 77°43'05", Fauquier County, at culvert on U.S. Highway 17, 1.7 miles northwest of Morrisville.	2.28	1966-71	2-13-71	4.35	280
01665200	Rock Run tributary near Goldvein, Va.	Lat 38°27'45", long 77°40'10", Fauquier County, at culvert on U.S. Highway 17, 1.5 miles northwest of Goldvein.	1.00	1966-71	5-30-71	3.25	(*)
01665300	Rapidan River near Stanardsville, Va.	Lat 38°21'13", long 78°22'29", Madison County, at bridge on State Highway 230, 5.3 miles northeast of Stanardsville.	37.6	1967-71	1971	(a)	(*)
01665400	Conway River near Stanardsville, Va.	Lat 38°19'58", long 78°23'53", Madison County, at bridge on State Highway 230, 3.4 miles northeast of Stanardsville.	25.8	1967-71	5-30-71	17.33	(*)
01665450	South River near Stanardsville, Va.	Lat 38°18'50", long 78°25'45", Greene County, at bridge on State Highway 230, 1.3 miles north of Stanardsville.	18.8	1967-71	1971	(a)	(*)
01667600	Cedar Run tributary near Culpeper, Va.	Lat 38°23'50", long 78°00'25", Culpeper County, at culvert on U.S. Highway 522, 5 miles south of Culpeper.	.58	1966-71	5-30-71	6.14	106
01668200	Gingoteague Run near Port Royal, Va.	Lat 38°12'40", long 77°09'10", King George County, at culvert on State Highway 623, 3.5 miles northeast of Port Royal.	2.82	1966-71	8-27-71	7.47	77
01668300	Farmers Hall Creek near Champlain, Va.	Lat 38°00'05", long 76°58'40", Essex County, at culvert on U.S. Highway 17, 1.2 miles southeast of Champlain.	2.18	1966-71	5-30-71	5.17	87
		PIANKATANK RIVER BASIN					
01669300	Yorkers Swamp near Center Cross, Va.	Lat 37°47'10", long 76°45'55", Essex County, at culvert on U.S. Highway 17, 1.5 miles southeast of Center Cross.	1.37	1966-71	1971	(a)	(*)
		YORK RIVER BASIN					
01670100	Mountain Run tributary near Gordonsville, Va.	Lat 38°09'45", long 78°09'45", Orange County, at culvert on U.S. Highway 15, 2.2 miles northeast of Gordonsville.	0.50	1966-71	8-27-71	3.70	24
01671650	Waldrops Creek near Louisa, Va.	Lat 38°00'08", long 78°04'22", Louisa County, at culvert on State Highway 632, 4.2 miles southwest of Louisa.	2.85	1969-71	5-13-71	6.30	(*)
01671750	Harris Creek near Trevilians, Va.	Lat 38°01'02", long 78°03'06", Louisa County, at culvert on State Highway 632, 2.7 miles southeast of Trevilians.	3.31	1969-71	5-13-71	7.33	(*)
01672400	South Anna River tributary near Ashland, Va.	Lat 37°48'40", long 77°34'20", Hanover County, at culvert on State Highway 54, 5.5 miles northwest of Ashland.	.33	1966-71	8-27-71	5.59	(*)
01672900	Pamunkey River tributary near Hanover, Va.	Lat 37°48'00", long 77°22'20", Caroline County, at culvert on U.S. Highway 301, 2.6 miles north of Hanover.	.71	1966-71	5-30-71	3.22	20
01674100	Motto River tributary near Cedon, Va.	Lat 38°05'24", long 78°31'11", Caroline County, at culvert on State Highway 605, 1.9 miles north of Cedon.	1.64	1967-71	8-27-71	4.41	(*)
		JAMES RIVER BASIN					
02009500	Jackson River tributary near Bolar, Va.	Lat 38°16'00", long 79°40'20", Highland County, at culvert on U.S. Highway 220, 3.5 miles north of Bolar.	0.74	1966-71	2-13-71	3.92	26

See footnotes at end of table, p. 214.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum Date	Annual maximum Gage height (feet)	Annual maximum Discharge (cfs)
		JAMES RIVER BASIN--Continued					
02012950	Sweet Springs Creek tributary at Sweet Chalybeate, Va.	Lat 37°39'25", long 80°14'10", Alleghany County, at culvert on State Highway 311, 0.9 mile north of Sweet Chalybeate.	0.66	1966-71	9-12-71	7.87	(*)
02015600	Cowpasture River near Head Waters, Va.	Lat 38°19'30", long 79°26'14", Augusta County, at bridge on U.S. Highway 250, 1.2 miles west of Head Waters.	11.3	1949-71	5-30-71	4.50	450
02015900	Jerry Branch near Clifton Forge, Va.	Lat 37°52'23", long 79°44'36", Alleghany County, at culvert on State Highway 42, 6 miles northeast of Clifton Forge.	.55	1967-71	2-13-71	3.44	54
02017300	Craig Creek at New Castle, Va.	Lat 37°30'06", long 80°06'18", Craig County, at bridge on State Highway 616, at New Castle.	112	1967-71	5-30-71	10.09	3,200
02017400	Johns Creek tributary near New Castle, Va.	Lat 37°30'30", long 80°11'20", Craig County, at culvert on State Highway 311, 4.2 miles west of New Castle.	1.57	1967-71	5-30-71	4.32	(*)
02017700	Craig Creek tributary near New Castle, Va.	Lat 37°33'21", long 79°59'52", Craig County, at culvert on State Highway 606, 7.1 miles northeast of New Castle.	2.05	1968-71	10-31-70	6.38	252
02018700	Campbell Branch near Fincastle, Va.	Lat 37°32'37", long 79°57'28", Botetourt County, at culvert on State Highway 606, 5.3 miles northwest of Fincastle.	1.51	1968-71	1971	(a)	(*)
02018800	North Fork near Fincastle, Va.	Lat 37°32'07", long 79°56'03", Botetourt County, at culvert on State Highway 606, 3.9 miles northwest of Fincastle.	4.17	1968-71	2-13-71	5.15	304
02019400	Mill Creek near Buchanan, Va.	Lat 37°29'48", long 79°45'28", Botetourt County, at bridge on State Highway 636, 5 miles southwest of Buchanan.	29.6	1950-71	2-13-71	6.28	1,670
02020100	Renick Run near Buchanan, Va.	Lat 37°35'27", long 79°38'04", Botetourt County, at culvert on Frontage Road of Interstate Highway 81, 4.8 miles northeast of Buchanan.	2.06	1967-71	5-30-71	4.55	282
02020200	Calfpasture River near West Augusta, Va.	Lat 38°16'24", long 79°18'02", Augusta County, at bridge on U.S. Highway 250, 1.5 miles east of West Augusta.	12.8	1949-71	5-30-71	5.46	(*)
02021100	Bratton Creek tributary near Goshen, Va.	Lat 37°55'55", long 79°34'40", Rockbridge County, at culvert on State Highway 780, 5.8 miles southwest of Goshen.	1.62	1966-71	1971	(a)	(*)
02021700	Cedar Grove Branch near Rockbridge Baths, Va.	Lat 37°53'00", long 79°23'10", Rockbridge County, at culvert on State Highway 39, 1.8 miles southeast of Rockbridge Baths.	12.3	1967-71	2-13-71	5.82	345
02023300	South River near Steeles Tavern, Va.	Lat 37°55'50", long 79°09'55", Augusta County, at bridge on State Highway 608, 3 miles east of Steeles Tavern.	15.7	1951-71	5-30-71	2.58	274
02025800	Burton Creek tributary at Lynchburg, Va.	Lat 37°21'10", long 79°11'05", Campbell County, at culvert on access road just west of U.S. Highway 29, 0.6 mile south of city limits of Lynchburg.	2.36	1966-71	5-30-71	5.17	(*)
02027700	Buffalo River tributary near Amherst, Va.	Lat 37°33'45", long 78°57'35", Amherst County, at culvert on U.S. Highway 60, 5.2 miles southeast of Amherst.	.46	1966-71	5-30-71	3.32	30
02028800	Ballinger Creek at Esmont, Va.	Lat 37°49'39", long 78°36'32", Albemarle County, at bridge on State Highway 6, at Esmont.	5.42	1967-71	5-30-71	12.45	(*)
02028900	Miller Creek near Scottsville, Va.	Lat 37°48'30", long 78°30'46", Albemarle County, at bridge on State Highway 6, 1.5 miles west of Scottsville.	6.60	1967-71	5-30-71	10.05	(*)

See footnotes at end of table, p. 214.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
		JAMES RIVER BASIN--Continued					
02029200	North Fork Hardware River at Red Hill, Va.	Lat 37°58'03", long 78°37'04", Albemarle County, at bridge on U.S. Highway 29, 0.5 mile west of Red Hill.	11.0	1950-71	2-13-71	5.95	246
02029410	Sowell Branch near Charlottesville, Va.	Lat 37°56'30", long 78°32'16", Albemarle County, at culvert on State Highway 20, 6.8 miles southwest of Charlottesville.	1.55	1967-71	5-30-71	3.50	(*)
02029430	Harris Creek near Keene, Va.	Lat 37°53'05", long 78°33'00", Albemarle County, at bridge on State Highway 20, 1.4 miles north of Keene.	1.71	1967-71	5-30-71	4.72	(*)
02029450	Thomas Creek near Keene, Va.	Lat 37°52'25", long 78°33'10", Albemarle County, at culvert on State Highway 20, 0.7 mile north of Keene.	.28	1966-71	5-30-71	2.60	21
02030100	Frisby Branch near Buckingham, Va.	Lat 37°31'15", long 78°37'04", Buckingham County, at culvert on State Highway 24, 4 miles southwest of Buckingham.	4.35	1967-71	5-13-71	7.80	(*)
02030800	Stockton Creek near Afton, Va.	Lat 38°01'48", long 78°48'30", Albemarle County, at culvert on State Highway 6, 1.7 miles east of Afton.	2.80	1967-71	5-30-71	6.29	(*)
02030900	Powells Creek near Crozet, Va.	Lat 38°04'50", long 78°43'02", Albemarle County, at bridge on State Highway 684, 1.2 miles northwest of Crozet.	2.32	1967-71	5-30-71	3.92	(*)
02031500	North Fork Moormans River near Whitehall, Va.	Lat 38°08'25", long 78°45'05", Albemarle County, 0.8 mile upstream from city of Charlottesville dam, and 1.5 miles west of Whitehall.	11.4	1952-63‡ 1964-71	5-30-71	6.98	1,840
02032200	Doyles River near Whitehall, Va.	Lat 38°12'10", long 78°40'17", Albemarle County, at bridge on State Highway 810, 5.9 miles north of Whitehall.	6.70	1967-71	5-30-71	12.04	(*)
02032300	Muddy Run near Stanardsville, Va.	Lat 38°14'05", long 78°37'02", Albemarle County, at bridge on State Highway 810, 11 miles southwest of Stanardsville.	3.36	1967-71	5-30-71	6.77	(*)
02032530	Parker Branch near Stanardsville, Va.	Lat 38°17'10", long 78°30'50", Greene County, at culvert on State Highway 810, 4.3 miles west of Stanardsville.	3.24	1967-71	5-30-71	5.77	(*)
02032540	Haneytown Creek near Stanardsville, Va.	Lat 38°16'48", long 78°30'50", Greene County, at bridge on State Highway 810, 4.5 miles west of Stanardsville.	4.45	1967-71	5-30-71	12.70	520
02032550	Lynch River at Nortonsville, Va.	Lat 38°14'16", long 78°32'32", Albemarle County, at bridge on State Highway 810, 7 miles southwest of Stanardsville.	13.6	1967-71	5-30-71	14.35	(*)
02032600	Swift Run tributary near Stanardsville, Va.	Lat 38°20'33", long 78°30'37", Greene County, at culvert on U.S. Highway 33, 4.9 miles northwest of Stanardsville.	.35	1966-71	5-30-71	6.20	19
02032700	Schenks Branch at Charlottesville, Va.	Lat 38°02'32", long 78°28'30", Charlottesville City, at bridge just upstream from U.S. Highway 250 bypass.	1.34	1950-71	9-11-71	5.05	(*)
02033300	Moores Creek near Charlottesville, Va.	Lat 38°00'25", long 78°34'25", Albemarle County, at culvert on access road, 150 ft north of U.S. Highway 29, and 4 miles southwest of Charlottesville.	3.52	1967-71	9-11-71	15.04	(*)
02033700	Henderson Creek near Shadwell, Va.	Lat 37°59'05", long 78°24'05", Albemarle County, at culvert on State Highway 729, 2.0 miles south of Shadwell.	1.76	1966-71	5-30-71	7.55	(*)
02034050	Hunters Branch near Palmyra, Va.	Lat 37°56'48", long 78°14'30", Fluvanna County, at culvert on U.S. Highway 15, 6.1 miles north of Palmyra.	1.63	1967-71	5-30-71	3.42	(*)

See footnotes at end of table, p. 214.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
		JAMES RIVER BASIN--Continued					
02034250	Whispering Creek at Sprouses Corner, Va.	Lat 37°31'31", long 78°29'03", Buckingham County, at culvert on U.S. Highway 60, 0.5 mile southeast of Sprouses Corner.	0.43	1962-71	5-30-71	3.11	(*)
02035400	Big Lickinghole Creek tributary near Ferncliff, Va.	Lat 37°49'34", long 77°58'23", Goochland County, at bridge on U.S. Highway 250, 10.1 miles southeast of Ferncliff.	.55	1962-71	5-30-71	3.35	(*)
02035450	Rocketts Creek tributary near Gum Springs, Va.	Lat 37°47'15", long 77°54'40", Goochland County, at culvert on U.S. Highway 250, 1.2 miles northwest of Gum Springs.	.34	1966-71	5-20-71	5.85	88
02037800	Falling Creek near Midlothian, Va.	Lat 37°27'15", long 77°35'20", Chesterfield County, at bridge on State Highway 653, 4 miles southeast of Midlothian.	18.1	1951-71	8-27-71	6.18	576
02038800	Appomattox River near Appomattox, Va.	Lat 37°22'55", long 78°47'24", Appomattox County, at bridge on State Highway 24, 3.0 miles northeast of Appomattox.	5.79	1955-71	5-30-71	6.06	(*)
02038900	Dry Creek near Farmville, Va.	Lat 37°20'45", long 78°24'45", Cumberland County, at culvert on State Highway 635, 3.5 miles northwest of Farmville.	3.64	1966-71	5-30-71	4.97	(*)
02040600	Nibbs Creek tributary near Amelia, Va.	Lat 37°23'45", long 77°58'20", Amelia County, at culvert on State Highway 609, 3.8 miles north of Amelia.	.35	1966-71	9-12-71	8.00	114
02042200	Glebe Creek tributary near Charles City, Va.	Lat 37°22'05", long 77°04'15", Charles City County, at culvert on State Highway 155, 2.0 miles north of Charles City.	b.7	1948, 1951-71	5-30-71	2.00	(*)
02042250	Bailey Branch tributary at Spring Grove, Va.	Lat 37°10'29", long 76°59'13", Surry County, at culvert on State Highway 10, 1.0 mile northwest of Spring Grove.	.71	1967-71	1971	(a)	(*)
02042300	Horsepen Branch at Richmond, Va.	Lat 37°35'45", long 77°30'40", Henrico County, at culvert on U.S. Highway 250 (Broad Street), at Richmond.	1.35	1965-71	7-31-71	3.90	710
02042400	Jordan Branch at Richmond, Va.	Lat 37°35'10", long 77°29'55", Henrico County, at bridge on U.S. Highway 250 (Broad Street), at Richmond.	2.41	1965-71	7-11-71	10.33	(*)
02042700	Collins Run near Providence Forge, Va.	Lat 37°23'59", long 77°02'54", Charles City County, at bridge on State Highway 155, 2.5 miles south of Providence Forge.	2.84	1948, 1951-71	9-30-71	4.87	224
02042710	Collins Run tributary near Providence Forge, Va.	Lat 37°24'15", long 77°02'50", Charles City County, at culvert on State Highway 155, 2.6 miles south of Providence Forge.	.28	1966-71	9-30-71	4.34	46
		CHOWAN RIVER BASIN					
02044200	Falls Creek tributary near Victoria, Va.	Lat 37°02'04", long 78°10'26", Lunenburg County, at culvert on State Highway 49, 3.6 miles northeast of Victoria.	0.34	1962-71	8- 4-71	5.20	110
02044400	Hurricane Branch at Blackstone, Va.	Lat 37°04'47", long 77°58'55", Nottoway County, at culvert on State Highway 40, 0.3 mile east of Blackstone.	1.61	1967-71	5-30-71	6.20	(*)
02046200	Millrun Branch near McKenney, Va.	Lat 36°56'47", long 77°34'41", Dinwiddie County, at bridge on State Highway 40, 9.3 miles east of McKenney.	2.29	1962-71	5-30-71	3.88	(*)
02046400	Jones Hole Swamp tributary near Carson, Va.	Lat 37°04'13", long 77°20'30", Prince George County, at culvert on State Highway 35, 3.8 miles northeast of Carson.	3.02	1967-71	5-30-71	3.65	(*)

See footnotes at end of table, p. 214.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
CHOWAN RIVER BASIN--Continued							
02046500	Anderson Branch at Sussex, Va.	Lat 36°55'10", long 77°15'45", Sussex County, at bridge on State Highway 40, 1.0 mile east of Sussex.	5.35	1949-56‡ 1967-71	6-24-71	4.58	50
02046800	Three Creek tributary near Drewryville, Va.	Lat 36°41'36", long 77°20'58", Southampton County, at bridge on U.S. Highway 58, 2.8 miles southwest of Drewryville.	1.25	1962-71	2- 4-71	3.30	(*)
02046900	Musgrave Branch near Drewryville, Va.	Lat 36°42'13", long 77°16'29", Southampton County, at culvert on U.S. Highway 58, 2.0 miles east of Drewryville.	1.99	1966-71	2- 4-71	4.70	60
02048400	Seacock Creek near Ivor, Va.	Lat 36°55'28", long 76°55'48", Southampton County, at bridge on State Highway 618, 2 miles northwest of Ivor.	27.4	1950-71	9-30-71	3.79	228
02049700	Cypress Swamp near Burdette, Va.	Lat 36°44'29", long 76°56'18", Southampton County, at bridge on State Highway 635, 3 miles southwest of Burdette.	8.55	1950-71	1- 5-71	4.73	122
02050050	Blackwater River tributary near Holland, Va.	Lat 36°38'44", long 76°51'29", Nansemond County, at culvert on State Highway 189, 4.9 miles southwest of Holland.	2.76	1967-71	1- 5-71	5.40	138
02050400	North Meherrin River near Briery, Va.	Lat 37°04'20", long 78°27'45", Charlotte County, at culvert on U.S. Highway 360, 1.3 miles south of Briery, and 2.5 miles northeast of Keysville.	1.19	1966-71	8-27-71	6.28	255
02050500	North Meherrin River near Keysville, Va.	Lat 37°03'05", long 78°25'20", Lunenburg County, at bridge on State Highway 687, 3.5 miles northeast of Keysville.	b9.2	1949-61‡ 1967-71	5-30-71	6.23	932
02051650	Rocky Run near Dolphin, Va.	Lat 36°47'35", long 77°49'35", Brunswick County, at culvert on State Highway 641, 3.2 miles southwest of Dolphin.	1.41	1966-71	5-30-71	6.18	(*)
02051700	Rocky Run at Lawrenceville, Va.	Lat 36°46'14", long 77°50'28", Brunswick County, at culvert on State Highway 642, 0.4 mile northeast of Lawrenceville.	6.16	1954-63, 1967-71	5-30-71	6.85	(*)
ROANOKE RIVER BASIN							
02057700	Powder Mill Creek at Rocky Mount, Va.	Lat 37°00'26", long 79°52'25", Franklin County, at culvert on U.S. Highway 200 bypass at Rocky Mount.	0.64	1967-71	10-31-70	14.50	115
02059450	South Fork Goose Creek at Montvale, Va.	Lat 37°22'47", long 79°43'50", Bedford County, at culvert on State Highway 607, 0.5 mile south of Montvale.	7.56	1967-71	2-13-71	4.42	(*)
02061300	Nininger Creek near Bedford, Va.	Lat 37°16'26", long 79°29'31", Bedford County, at bridge on State Highway 43, 4.5 miles southeast of Bedford.	4.77	1949-71	9-19-71	5.82	1,400
02063600	Button Creek near Rustburg, Va.	Lat 37°17'25", long 79°04'10", Campbell County, at culvert on State Highway 24, 2.0 miles northeast of Rustburg.	.59	1966-71	5-30-71	4.05	72
02063700	Button Creek tributary near Rustburg, Va.	Lat 37°17'05", long 79°04'27", Campbell County, at culvert on State Highway 24, 2.0 miles northeast of Rustburg.	.16	1962-71	5-30-71	1.39	(*)
02065100	Snake Creek near Brookneal, Va.	Lat 37°00'42", long 78°57'52", Halifax County, at culvert on U.S. Highway 501, 2.1 miles south of Brookneal.	1.68	1967-71	5-30-71	4.66	120
02065300	Right Hand Fork near Appomattox, Va.	Lat 37°16'12", long 78°49'14", Appomattox County, at culvert on State Highway 727, 5.2 miles south of Appomattox.	2.08	1967-71	5-30-71	9.50	(*)
02066600	Sandy Creek near Wylliesburg, Va.	Lat 36°50'35", long 78°38'30", Charlotte County, at culvert on State Highway 608, 3.0 miles southwest of Wylliesburg.	8.84	1966-71	5-30-71	8.95	(*)

See footnotes at end of table, p. 214.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
		ROANOKE RIVER BASIN--Continued					
02067810	Maple Swamp Branch tributary near Meadows of Dan, Va.	Lat 36°44'10", long 80°26'28", Patrick County, at culvert on U.S. Highway 58, 1.8 miles west of Meadows of Dan.	0.49	1967-71	5-13-71	3.07	27
02069600	Anglin Branch near Stuart, Va.	Lat 36°38'15", long 80°12'55", Patrick County, at culvert on U.S. Highway 58, 3 miles east of Stuart.	3.10	1967-71	10-31-70	5.10	235
02071800	Nicholas Creek near Ferrum, Va.	Lat 36°52'11", long 80°03'10", Franklin County, at bridge on State Highway 605, 4.1 miles southwest of Ferrum.	12.2	1949-71	5-30-71	6.55	(*)
02075900	Lawsons Creek at Turbeville, Va.	Lat 36°36'41", long 79°01'28", Halifax County, at culvert on State Highway 658, 1 mile southeast of Turbeville.	b8.7	1951-71	9-11-71	11.33	(*)
02076200	Bearskin Creek near Chatham, Va.	Lat 36°50'30", long 79°29'05", Pittsylvania County, at culvert on State Highway 57, 4.5 miles west of Chatham.	4.06	1967-71	5-13-71	5.35	(*)
02076600	Whitethorn Creek tributary at Gretna, Va.	Lat 36°56'00", long 79°22'10", Pittsylvania County, at culvert on U.S. Highway 29, 0.9 mile southwest of Gretna.	1.93	1966-71	5-13-71	3.85	(*)
02076700	Blacks Creek near Mt. Airy, Va.	Lat 36°56'40", long 79°09'56", Pittsylvania County, at culvert on State Highway 40, 1.5 miles east of Mt. Airy.	3.44	1966-71	5-13-71	10.45	(*)
02079660	Jolly Holly Branch at Boydton, Va.	Lat 36°40'38", long 78°23'13", Mecklenburg County, at bridge on State Highway 92, 0.5 mile north of Boydton.	3.60	1954-71	5-30-71	3.62	(*)
02079720	Smith Creek tributary near South Hill, Va.	Lat 36°33'50", long 78°12'10", Mecklenburg County, at culvert on U.S. Highway 1, 12 miles southwest of South Hill.	.39	1966-71	5-30-71	5.41	145
		KANAWHA RIVER BASIN					
03162700	Wallen Creek near Trout Dale, Va.	Lat 36°38'00", long 81°24'10", Grayson County, at culvert on State Highway 16, 5 miles southeast of Trout Dale.	2.23	1966-71	2-13-71	5.78	155
03162800	Mill Creek near Trout Dale, Va.	Lat 36°40'06", long 81°24'24", Grayson County, at bridge on State Highway 16, 3 miles southeast of Trout Dale.	5.32	1951-71	1971	(a)	(*)
03162810	Saddle Creek tributary near Independence, Va.	Lat 36°37'11", long 81°12'55", Grayson County, at culvert on U.S. Highway 58, 3 miles west of Independence.	.39	1966-71	1971	(a)	(*)
03165200	Mill Creek tributary at Galax, Va.	Lat 36°40'38", long 80°54'02", Galax City, at culvert on U.S. Highways 58 & 221.	1.05	1966-71	9-11-71	6.05	223
03165700	Cripple Creek at Cedar Springs, Va.	Lat 36°49'31", long 81°16'45", Wythe County, at bridge on State Highway 749, 0.6 mile southeast of Cedar Springs.	11.3	1967-71	1971	(a)	(*)
03165800	Sugar Run near Speedwell, Va.	Lat 36°49'45", long 81°10'10", Wythe County, at bridge on State Highway 684, 1.1 miles north of Speedwell.	3.57	1967-71	1971	(a)	(*)
03167700	Beaverdam Creek at Hillsville, Va.	Lat 36°45'45", long 80°43'42", Carroll County, at bridge on U.S. Highway 58, at Hillsville.	4.13	1962-71	2-13-71	5.33	(*)
03168600	Peak Creek tributary near Pulaski, Va.	Lat 37°04'19", long 80°46'25", Pulaski County, at culvert on State Highway 636, 2 miles north of Pulaski.	.61	1949, 1951-71	10-30-70	2.84	(*)
03169200	Dodd Creek tributary near Floyd, Va.	Lat 36°52'21", long 80°20'00", Floyd County, at culvert on State Highway 8, 2.8 miles southwest of Floyd.	.96	1967-71	5-13-71	3.73	(*)

See footnotes at end of table, p. 214.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
		KANAWHA RIVER BASIN--Continued					
03171600	Little Stony Creek at Pembroke, Va.	Lat 37°19'10", long 80°38'25", Giles County, at culvert on U.S. Highway 460, at Pembroke.	24.0	1967-71	5-30-71	10.40	(*)
03171800	Helveys Mill Creek tributary at Point Pleasant, Va.	Lat 37°07'24", long 81°01'16", Bland County, at culvert on State Highway 42, 0.2 mile west of Point Pleasant.	.38	1957-71	2-13-71	1.29	(*)
		BIG SANDY RIVER BASIN					
03207400	Prater Creek at Vansant, Va.	Lat 37°13'05", long 82°06'10", Buchanan County, at bridge on State Highway 620, 1 mile south of Vansant.	19.8	1951-71	5- 7-71	4.22	665
		TENNESSEE RIVER BASIN					
03470900	Slemp Creek tributary near Sugar Grove, Va.	Lat 36°48'30", long 81°24'15", Smyth County, at culvert on State Highway 16, 2.4 miles north of Sugar Grove.	0.36	1966-71	1971	(a)	(*)
03471100	Dickey Creek at Sugar Grove, Va.	Lat 36°46'22", long 81°25'10", Smyth County, at bridge on State Highway 16, 0.4 mile southwest of Sugar Grove.	7.28	1967-71	8-11-71	15.82	(*)
03471200	South Fork Holston River at Teas, Va.	Lat 36°46'22", long 81°27'05", Smyth County, at bridge on State Highway 601, at Teas.	31.1	1967-71	8-11-71	14.42	(*)
03472500	Beaverdam Creek at Damascus, Va.	Lat 36°37'40", long 81°47'28", Washington County, at Damascus, 0.6 mile upstream from mouth.	56.0	1948-59‡ 1960-71	5- 7-71	3.62	1,390
03473500	Middle Fork Holston River at Groseclose, Va.	Lat 36°53'19", long 81°20'51", Smyth County, 10 ft downstream from bridge on State Highway 679, at Groseclose.	7.39	1948-57‡ 1958-71	5- 7-71	3.90	156
03473600	Middle Fork Holston River near Groseclose, Va.	Lat 36°53'10", long 81°22'25", Smyth County, at bridge on U.S. Highway 11, 1.5 miles west of Groseclose.	13.3	1967-71	1971	(a)	(*)
03473800	Staley Creek near Marion, Va.	Lat 36°49'25", long 81°28'25", Smyth County, at bridge on State Highway 688, 2 miles southeast of Marion.	8.33	1951-71	5- 7-71	3.05	202
03474700	Hutton Creek near Chilhowie, Va.	Lat 36°47'00", long 81°44'05", Washington County, at bridge on U.S. Highway 11, 3.3 miles southwest of Chilhowie.	8.32	1967-71	1971	(a)	(*)
03474800	Hall Creek near Glade Spring, Va.	Lat 36°45'47", long 81°48'15", Washington County, at bridge on U.S. Highway 11, 2.5 miles south of Glade Spring.	7.90	1967-71	1971	(a)	(*)
03475700	Spring Creek near Abingdon, Va.	Lat 36°40'43", long 82°02'29", Washington County, at culvert on U.S. Highway 11, 3.8 miles southwest of Abingdon.	2.99	1967-71	7-10-71	3.43	(*)
03487800	Lick Creek near Chatham Hill, Va.	Lat 36°57'44", long 81°28'21", Smyth County, 270 ft upstream from bridge on State Highway 42, 2.9 miles east of Chatham Hill.	25.5	1966-68‡ 1969-71	5- 7-71	5.25	1,040
03487850	Possum Jaw Creek near Chatham Hill, Va.	Lat 36°57'41", long 81°27'52", Smyth County, at bridge on State Highway 42, 3.3 miles east of Chatham Hill.	4.36	1967-71	5- 7-71	9.28	(*)
03487900	Sprouts Creek near Chatham Hill, Va.	Lat 36°58'10", long 81°30'32", Smyth County, at culvert on State Highway 42, 1.2 miles northeast of Chatham Hill.	7.64	1967-71	5- 7-71	3.55	(*)
03488500	North Fork Holston River at Holston, Va.	Lat 36°46'29", long 82°04'22", Washington County, at bridge on U.S. Highway 19, 0.5 mile east of Holston.	402	1952-59‡ 1960-71	5- 7-71	11.89	12,000

See footnotes at end of table, p. 214.

Annual maximum discharge at crest-stage partial-record stations--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
		TENNESSEE RIVER BASIN--Continued					
03489700	Fleenor Branch near Bristol, Va.	Lat 36°38'10", long 82°15'20", Washington County, at culvert on U.S. Highways 58 & 421, 5.0 miles northwest of Bristol.	0.59	1966-71	1971	(a)	(*)
03489800	Cove Creek near Shelleys, Va.	Lat 36°39'13", long 82°21'16", Scott County, at bridge on U.S. Highway 58, 2 miles north of Shelleys.	17.3	1951-71	5- 7-71	6.20	(*)
03489850	Cove Creek near Hilton, Va.	Lat 36°39'08", long 82°21'53", Scott County, at bridge on State Highway 803, 7.2 miles east of Hilton.	17.6	1967-68‡ 1969-71	5- 7-71	5.19	(*)
03489870	Big Moccasin Creek at Collinwood, Va.	Lat 36°44'16", long 82°19'25", Russell County, at bridge on State Highway 612, at Collinwood.	41.9	1967-68‡ 1969-71	5- 7-71	5.77	(*)
03489900	Big Moccasin Creek near Gate City, Va.	Lat 36°38'47", long 82°33'12", Scott County, at bridge on State Highway 71, 1.6 miles east of Gate City.	79.6	1953-59‡ 1960-66 1967-68‡ 1969-71	5- 7-71	8.04	2,930
03523000	Cedar Creek near Lebanon, Va.	Lat 36°54'29", long 82°02'20", Russell County, 200 ft upstream from bridge on U.S. Highway 19, 2.3 miles east of Lebanon.	51.5	1953-59‡ 1960-71	5- 7-71	3.80	2,390
03524500	Guest River at Coeburn, Va.	Lat 36°55'45", long 82°27'23", Wise County, at bridge on State Highway 72, 1.0 mile southwest of Coeburn.	87.3	1950-59‡ 1960-71	5- 7-71	9.88	3,220
03525000	Stony Creek at Fort Blackmore, Va.	Lat 36°46'30", long 82°34'50", Scott County, 1,000 ft upstream from bridge on State Highway 66, at Fort Blackmore.	41.4	1950-52‡ 1953-71	5- 7-71	4.85	(*)
03525800	Copper Creek tributary near Dickensonville, Va.	Lat 36°49'50", long 82°12'40", Russell County, at culvert on U.S. Highway Alternate 58, 1.1 miles southeast of Dickensonville.	.99	1966-71	7-29-71	5.49	124
03529500	Powell River at Big Stone Gap, Va.	Lat 36°52'08", long 82°46'32", Wise County, at bridge on U.S. Highway 23, at Big Stone Gap.	112	1945-59‡ 1960-71	5- 7-71	6.24	4,780
03530000	South Fork Powell River at Big Stone Gap, Va.	Lat 36°51'54", long 82°46'16", Wise County, at bridge on U.S. Highway 23, at Big Stone Gap.	b40	1945-47‡ 1951-71	7-20-71	8.18	3,230
03530500	North Fork Powell River at Pennington Gap, Va.	Lat 36°46'26", long 83°01'59", Lee County, at bridge on State Highway 621, 0.8 mile north of Pennington Gap.	b70	1945-51‡ 1952-71	5- 7-71	7.85	(*)

* Discharge not determined.
‡ Operated as a continuous-record gaging station.
a Peak stage did not reach bottom of gage.
b Approximately.

Discharge measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table. Those that are measurements of base flow are designated by an asterisk (*).

Discharge measurements made at miscellaneous sites

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Part 1B	NASSAWADOX CREEK BASIN					
Nassawadox Creek a/	Chesapeake Bay	Lat 37°31'31", long 75°52'37", Northampton County, at culvert on State Highway 606, 2.7 miles upstream from Kelly Cove, and 3.5 miles north of Nassawadox.	b4.2	1968-70	10- 7-70	*0.40
					11- 5-70	*.88
					12- 3-70	*.98
					1- 7-71	*1.9
					2- 3-71	*1.1
					3- 4-71	11
					3-31-71	6.5
					5- 5-71	*2.4
					6- 2-71	12
					6-30-71	*1.4
					8- 4-71	*.43
					9- 2-71	*.73
	POTOMAC RIVER BASIN					
Opequon Creek	Potomac River	Lat 39°07'12", long 78°06'13", Clarke County, at bridge on State Highway 723, 2.0 miles downstream from Wrights Run, and 3.0 miles northwest of Boyce.	38.5	-	12-10-70	*12
					12-17-70	177
					1-26-71	76
					2- 8-71	22
					3-10-71	32
Cedar Creek	North Fork Shenandoah River	Lat 39°04'53", long 78°25'30", Frederick County, at State Highway 55 at Star Tannery, 3.7 miles northwest of Lebanon Church.	50.1	1968-69	12-10-70	*14
					2- 9-71	47
					4-29-71	28
Sugarland Run	Potomac River	Lat 38°58'00", long 77°22'17", Fairfax County, at bridge 0.9 mile east of center of Herndon.	3.36	1965-69	10- 2-69	*.07
					7- 1-70	0
					8- 3-70	*.13
					8-31-70	0
South Fork Little Difficult Run	Little Difficult Run	Lat 38°53'52", long 77°21'12", Fairfax County, at bridge on Fox Mill Road, 1.2 miles upstream from mouth, and 3.2 miles northwest of Fairfax.	1.59	1966-69	10- 1-69	*.28
					8-27-70	*.36
					9-23-70	*.08
					9-29-71	.51
Piney Branch	Difficult Run	Lat 38°54'06", long 77°15'57", Fairfax County, on right bank 30 ft downstream from North Center Street, at Vienna.	c.29	1961-69	8-31-70	*.02
					9-23-70	0
					9-28-71	*.02
Colvin Run	Difficult Run	Lat 38°57'56", long 77°18'36", Fairfax County, on right bank 10 ft downstream from highway bridge, 0.8 mile east of Reston.	5.09	1961-70	9-29-71	1.9
Scott Run	Potomac River	Lat 38°57'32", long 77°12'21", Fairfax County, on left bank at bridge on Old Georgetown Pike, 0.8 mile upstream from mouth, and 2.3 miles northwest of McLean.	4.69	1961-69	10-31-69	*3.4
					6- 2-70	*1.7
					8- 4-70	*1.2
					8-28-70	*.86
					9-22-70	*.57
Pimmit Run	Potomac River	Lat 38°54'41", long 77°11'05", Fairfax County, at bridge at Great Falls Road, 1.1 miles north of city boundary of Falls Church.	2.87	1960-69	8-28-70	*.09
					9-29-71	*.20
Pimmit Run	Potomac River	Lat 38°56'05", long 77°08'26", Fairfax County, on right bank 150 ft downstream from bridge on Kirby Road, 150 ft upstream from Little Pimmit Run, and 0.8 mile northwest of Arlington County boundary.	8.12	1960-70	9-28-71	*2.4
Little Pimmit Run tributary	Little Pimmit Run	Lat 38°54'27", long 77°08'18", Arlington County, about 500 ft upstream from Little Falls Road.	.41	1963-69	8-31-70	*.01
					9-22-70	*.02
					9-28-71	.08
Little Pimmit Run	Pimmit Run	Lat 38°55'22", long 77°08'43", Fairfax County, at bridge on State Highway 689, 0.4 mile northwest of Arlington County boundary.	2.31	1960-70	9-28-71	*.42

See footnotes at end of table, p. 218.

Discharge measurements made at miscellaneous sites--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
		POTOMAC RIVER BASIN--Continued				
Holmes Run	Cameron Run	Lat 38°51'57", long 77°12'45", Fairfax County, on left bank 100 ft downstream from U.S. Highway 50 at Merrifield.	2.70	1960-69	3- 3-70 5- 5-70 8-27-70 9-22-70	*0.95 *1.5 *.15 *.11
Holmes Run	Cameron Run	Lat 38°50'47", long 77°10'28", Fairfax County, on left bank 150 ft downstream from Sleepy Hollow Road, 0.5 mile upstream from Lake Barcroft, and 1.6 miles northeast of Annandale.	7.10	1960-69	10- 1-69 8-31-70 9-22-70 9-29-71	*.53 *.30 *.14 *1.0
Tripps Run	Holmes Run	Lat 38°52'46", long 77°08'14", Falls Church City, on right bank 200 ft upstream from South Washington Street.	1.78	1960-69	4- 1-70 7- 1-70 8-27-70 9-22-70 9-28-71	*.90 *.20 *.10 *.03 *.21
Tripps Run	Holmes Run	Lat 38°51'37", long 77°09'57", Fairfax County, at Sleepy Hollow Road, 0.7 mile upstream from Lake Barcroft, and 1.0 mile southwest of Falls Church.	4.55	1960-69	8-31-70 9-22-70 9-29-71	*.72 *.38 *.82
Backlick Run	Cameron Run	Lat 38°48'05", long 77°11'14", Fairfax County, on right bank 10 ft downstream from Leesville Blvd., at Springfield.	2.02	1960-69	8-28-70 9-22-70 9-29-71	*.01 0 .05
Backlick Run	Cameron Run	Lat 38°48'11", long 77°07'41", Alexandria City, 0.9 mile upstream from confluence with Holmes Run.	13.4	1960-69	8-28-70 9-29-71	*.98 *2.6
Penn Daw outfall	Hunting Creek	Lat 38°47'19", long 77°03'54", Fairfax County, at Huntington Ave., 0.5 mile southwest of Alexandria.	.82	1960-70	9-29-71	*.16
Accotink Creek	Potomac River	Lat 38°51'39", long 77°16'17", Fairfax County, at bridge at Pickett Street, at Fairfax.	6.80	1961-69	8-27-70 9-30-71	*.44 *1.4
Long Branch	Accotink Creek	Lat 38°52'23", long 77°14'34", Fairfax County, on left bank at Lee Highway, 0.5 mile upstream from Arlington Blvd., 0.5 mile southeast of Vienna.	1.18	1963-69	8-31-70 9-22-70 9-29-71	*.03 *.01 *.17
Long Branch	Accotink Creek	Lat 38°48'39", long 77°14'07", Fairfax County, at bridge on State Highway 620, 2.5 miles southwest of Annandale.	3.71	1959-69	10- 1-69 5- 5-70 6- 2-70 8-28-70 9-27-70 9-30-71	*1.0 *2.6 *1.4 *.88 *.76 *1.9
Rabbit Branch	Pohick Creek	Lat 38°48'06", long 77°17'19", Fairfax County, on left bank 5 ft upstream from highway bridge, 0.35 mile upstream from Southern Railway, 1.1 miles northwest of Burke.	3.81	1960-62, 1964-70	9-30-71	*1.6
Pohick Creek	Potomac River	Lat 38°45'26", long 77°13'37", Fairfax County, at bridge on Hooes Road, 2.9 miles southwest of Springfield.	15.0	1960, 1962-69	10- 1-69 7- 1-70 8-31-70 9-21-70 9-29-71	*3.1 *3.1 *2.0 *2.4 4.6
Middle Run	Pohick Creek	Lat 38°45'01", long 77°14'03", Fairfax County, at bridge on Gambrill Road, 3.2 miles north of Lorton.	3.56	1960, 1962-70	9-29-71	*.43
South Run	Pohick Creek	Lat 38°44'11", long 77°15'10", Fairfax County, at bridge at Hooes Road, 2.7 miles northwest of Lorton.	6.54	1960, 1962-70	9-30-71	*.45
Pohick Creek	Potomac River	Lat 38°42'14", long 77°12'52", Fairfax County, at bridge on Lorton Road, 0.6 mile east of Lorton.	31.0	1960, 1962-69	8-28-70 9-21-70 9-29-71	*5.4 *2.8 8.3

See footnotes at end of table, p. 218.

Discharge measurements made at miscellaneous sites--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
		POTOMAC RIVER BASIN--Continued				
Broad Run a/	Occoquan River	Lat 38°44'56", long 77°33'50", Prince William County, at bridge on State Highway 619, 2.3 miles northeast of Bristow.	89.6	1968-70	10- 7-70	*4.9
					11- 4-70	12
					12- 1-70	*4.0
					1- 5-71	521
					2- 1-71	64
					3- 1-71	132
					4- 6-71	*46
					5- 4-71	*29
					6- 1-71	464
					7- 2-71	26
					8- 3-71	27
					8-30-71	29
Black Branch a/	Bull Run	Lat 38°54'46", long 77°37'43", Prince William County, at bridge on U.S. Highway 15, 4.4 miles northeast of Waterfall.	3.05	1969-70	10- 7-70	*.01
					11- 3-70	4.9
					11-30-70	*1.4
					12-30-70	1.7
					2- 1-71	2.3
					3- 1-71	3.4
					4- 6-71	2.2
					5- 3-71	*1.9
					6- 3-71	3.8
					7- 2-71	*.89
					8- 4-71	2.8
					8-31-71	*.41
Bull Run a/	Occoquan River	Lat 38°50'57", long 77°32'47", Loudoun-Prince William County line, at bridge on State Highway 659, 1.4 miles east of Catharpin.	36.9	1968-70	10- 7-70	*.04
					11- 3-70	3.7
					11-30-70	*13
					12-30-70	22
					2- 1-71	12
					3- 1-71	44
					4- 6-71	21
					5- 3-71	*13
					6- 3-71	46
					7- 2-71	2.7
					8- 5-71	14
					8-31-71	1.8
Little Bull Run a/	Bull Run	Lat 38°50'32", long 77°32'22", Prince William County, at bridge on State Highway 234, 3.0 miles northwest of Bull Run.	27.2	1968-70	10- 7-70	*.26
					11- 3-70	13
					11-30-70	*10
					12-30-70	14
					2- 1-71	13
					3- 1-71	33
					4- 6-71	17
					5- 3-71	*10
					6- 3-71	32
					7- 2-71	*3.0
					8- 5-71	16
					8-31-71	3.7
Sandy Run	Occoquan River	Lat 38°44'53", long 77°19'23", Fairfax County, at bridge on Henderson Road, 3.5 miles upstream from mouth, and 3.7 miles south of Fairfax Station.	2.35	1964-69	10- 1-69	*0.27
					9-23-70	*.14
					9-30-71	*.62
Giles Run	Massey Creek	Lat 38°40'48", long 77°13'36", Fairfax County, at upstream side of culvert on U.S. Highway 1, 1.5 miles northeast of Woodbridge.	4.54	1964-69	10- 1-69	*1.2
					7- 2-70	*.92
					8-28-70	*.49
					9-21-70	*.40
					9-29-71	*.84
Part 2A		JAMES RIVER BASIN				
Calfpasture River a/	Maury River	Lat 38°02'42", long 79°28'20", Rockbridge County, 0.6 mile downstream from Ingram Draft, and 4.0 miles northeast of Goshen.	134	1970	10- 8-70	*2.2
					11- 2-70	208
					11- 3-70	290
					11-13-70	363
					11-24-70	135
					12- 2-70	173
					1-13-71	*134
					2- 2-71	132
					3- 2-71	*236
					5- 6-71	*40
					7- 7-71	46
					8- 4-71	40
					8-31-71	*5.8

See footnotes at end of table, p. 218.

Discharge measurements made at miscellaneous sites--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
		JAMES RIVER BASIN--Continued				
Upper Appomattox Canal a/	Appomattox River	Lat 37°13'18", long 77°30'12", Dinwiddie County, 300 ft below VEPCo Dam, 1.5 miles west of Matoaca, 1.7 miles upstream from State Highway 600, and 5.2 miles west of Petersburg. (See sta 02041650).	-	-	9-16-70	11
					10- 5-70	10
					11- 2-70	8.3
					11-30-70	8.5
					1- 5-71	10
					2- 1-71	8.1
					3- 1-71	12
					5- 3-71	10
					5-17-71	22
					5-31-71	17
					6- 4-71	16
					6-28-71	14
					8- 2-71	14
					8-31-71	18

* Base flow.

a Furnished by the Virginia Department of Conservation and Economic Development, Division of Water Resources.

b Approximately.

c Revised.

PART 2. WATER-QUALITY RECORDS

NORTH ATLANTIC SLOPE BASINS

POTOMAC RIVER BASIN

01631000 SOUTH FORK SHENANDOAH RIVER AT FRONT ROYAL, VA.

LOCATION.--Lat 38°54'50", long 78°12'40", Warren County, at gaging station on left bank 0.7 mile downstream from bridge on State Highway 619, 1.0 mile west of Front Royal, and 3.5 miles upstream from confluence with North Fork.

DRAINAGE AREA.--1,642 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1948 to September 1949, October 1952 to September 1956, February 1967 to September 1971.
Water temperatures: October 1952 to September 1956, April 1968 to September 1971.
Sediment records: April 1953 to September 1956.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DIS-CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO-RIDE (CL) (MG/L)
OCT.										
04...	281	4.3	20	48	15	18	4.5	190	30	17
11...	281	.9	20	38	12	18	4.3	148	29	19
19...	287	.4	0	46	16	20	4.6	196	33	19
25...	450	2.9	0	45	16	20	4.7	191	35	22
NOV.										
01...	2620	5.1	20	42	11	15	3.6	156	26	17
08...	2260	6.6	0	24	6.0	5.8	2.4	77	20	8.2
15...	3790	7.1	70	18	3.9	3.6	1.8	61	15	5.2
22...	1890	7.3	20	26	7.4	6.0	1.6	95	17	8.3
29...	1110	6.3	70	25	7.7	5.8	1.6	109	17	8.3
DEC.										
05...	896	4.9	10	33	10	8.4	1.4	131	20	11
12...	760	2.1	30	36	11	11	1.7	148	23	12
19...	1340	2.2	20	32	10	9.0	3.1	124	18	12
26...	2660	6.6	30	25	6.3	4.4	2.6	88	17	6.0
JAN.										
09...	3420	5.9	10	19	4.5	3.6	1.5	62	12	5.4
16...	2920	4.8	10	30	7.8	5.5	2.0	103	19	7.2
23...	1350	4.6	40	33	8.6	6.4	2.0	123	18	8.7
25...	1500	3.3	10	33	8.8	6.9	2.0	123	18	8.3
30...	1180	7.2	0	36	10	7.8	2.0	137	18	10
FEB.										
06...	1280	1.6	0	38	11	9.1	2.4	152	19	12
13...	2320	5.9	0	30	8.7	7.6	2.8	117	16	10
20...	2560	6.6	40	24	6.2	4.5	2.0	88	15	6.6
27...	3600	6.8	70	20	5.2	4.0	1.6	73	12	5.9
MAR.										
06...	3210	5.9	90	28	7.6	5.1	2.1	106	16	7.8
20...	1530	.9	0	32	9.0	5.4	1.7	120	17	8.0
27...	1300	.2	20	32	9.3	7.1	1.7	125	17	8.6
APR.										
03...	1220	.7	0	33	9.9	8.1	2.1	133	16	10
10...	3280	3.0	40	25	8.0	5.4	1.9	101	14	7.6
17...	1760	3.1	60	22	6.0	4.3	1.5	82	12	5.8
24...	1180	1.1	20	27	8.4	6.0	1.7	112	13	8.3
MAY										
01...	939	1.1	0	33	10	8.4	2.1	135	17	12
08...	830	2.3	20	34	11	7.6	2.2	142	16	10
15...	1430	3.4	0	34	11	9.6	2.3	138	18	12
22...	5920	7.8	20	25	5.7	4.7	1.7	84	13	6.5
29...	1390	7.0	0	25	6.6	4.4	1.5	94	13	6.5
JUNE										
05...	4900	7.4	20	24	5.6	3.6	1.5	84	14	4.5
12...	1640	7.8	180	31	8.5	6.2	1.9	120	16	8.0
19...	1790	5.6	20	36	10	6.0	2.2	138	17	8.1
26...	1260	1.5	10	39	9.9	6.2	2.1	140	16	8.1
JULY										
03...	1180	2.3	0	39	11	8.6	2.6	154	18	9.4
10...	857	5.2	0	41	12	9.0	2.7	162	25	9.6
17...	707	3.9	0	45	13	8.2	2.3	175	25	9.8
24...	613	6.5	20	44	13	11	3.1	178	23	14
31...	621	6.1	0	46	14	12	3.2	181	23	13
AUG.										
07...	1030	7.7	10	37	11	9.7	3.4	142	20	9.1
14...	642	6.4	20	42	11	12	3.7	157	22	13
21...	571	1.0	20	32	14	13	3.5	142	24	13
28...	550	6.9	10	41	14	15	3.4	165	24	15
SEP.										
04...	399	5.8	0	42	15	14	3.6	173	25	14
11...	468	1.1	0	41	14	15	3.8	175	23	18
18...	723	8.8	20	30	12	11	2.7	124	22	12
25...	850	9.8	0	26	9.1	9.0	2.8	106	19	10

01631000 SOUTH FORK SHENANDOAH RIVER AT FRONT ROYAL, VA.--Continued

EXTREMES.--1970-71:
Specific conductance: Maximum daily, 450 micromhos Oct. 6-8, 19; minimum daily, 104 micromhos June 1.
Water temperatures: Maximum, 27.0°C June 29, July 1; minimum, freezing point on several days during January to February.

Period of record:
Specific conductance (1952-56, 1967-71): Maximum daily, 465 micromhos Oct. 16-18, 1968; minimum daily, 81 micromhos Aug. 3, 1969.
Water temperatures: Maximum, 32.0°C July 5, 1955; minimum, freezing point on several days during winter period.

REMARKS.--Analyses of major chemical constituents determined from samples which are collected at seven-day intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	DIS-SCLVED FLUO-RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOS-PHATE (PO4) (MG/L)	DIS-SCLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPECI-FIC COND-UCTANCE (MICRO-MHOS)	PH (UNITS)	CCLCR (PLAT-INUM-COBALT UNITS)
OCT.									
04...	.2	5.0	.76	246	182	26	425	8.0	10
11...	.2	4.6	.80	207	145	23	370	7.8	10
18...	.2	3.5	.74	252	180	20	415	7.7	10
25...	.2	4.5	1.1	246	181	24	430	7.7	5
NOV.									
01...	.2	5.2	.77	201	150	20	357	7.9	7
08...	.1	2.3	.46	116	84	21	194	7.8	10
15...	.1	1.4	.25	87	62	12	151	7.6	10
22...	.1	5.0	.28	128	94	16	224	7.6	10
29...	.1	3.9	.32	137	100	14	244	7.7	5
DEC.									
05...	.1	4.1	.35	169	120	16	270	7.8	5
12...	.1	4.5	.50	180	140	14	310	7.9	3
19...	.2	5.9	.22	153	120	20	272	7.6	5
26...	.1	4.8	.28	119	88	16	192	7.4	10
JAN.									
09...	.1	3.5	.14	93	66	15	146	7.4	20
16...	.1	4.3	.25	134	110	22	225	7.5	15
23...	.1	5.2	.16	149	120	17	262	7.8	5
25...	.1	5.4	.21	144	120	18	170	7.9	3
30...	.1	5.4	.16	168	130	18	295	7.9	5
FEB.									
06...	.1	6.4	.16	180	140	16	330	8.0	10
13...	.1	7.2	.45	150	110	15	254	7.9	10
20...	.1	5.5	.22	113	86	14	200	7.6	5
27...	.1	5.1	.21	106	72	12	165	7.4	10
MAR.									
06...	.1	5.8	.21	140	100	14	220	7.7	20
20...	.1	3.9	.15	139	120	19	245	7.7	0
27...	.1	3.4	.15	146	120	16	250	7.8	5
APR.									
03...	.1	4.8	.16	155	120	15	280	7.6	0
10...	.1	3.7	.21	124	96	12	220	7.3	5
17...	.1	3.0	.51	107	80	12	193	7.6	5
24...	.1	2.5	.26	136	100	10	245	7.5	5
MAY									
01...	.1	4.1	.26	165	120	13	290	7.8	5
08...	.1	5.3	.53	169	130	14	307	7.8	5
15...	.1	6.1	.55	179	130	16	319	7.8	5
22...	.1	4.5	.52	121	86	17	196	7.4	10
29...	.1	4.1	.28	119	90	12	200	7.3	5
JUNE									
05...	.1	4.8	.20	113	83	14	185	7.7	5
12...	.1	5.8	.30	154	110	14	250	8.0	5
19...	.1	6.9	.32	164	130	18	289	7.7	5
26...	.1	4.2	.21	167	140	24	290	8.0	5
JULY									
03...	.1	4.2	.41	181	140	16	310	7.8	5
10...	.2	5.7	.57	206	150	20	340	7.9	10
17...	.2	4.2	.50	202	170	22	370	7.8	10
24...	.2	5.2	.66	214	160	18	380	7.7	6
31...	.2	5.3	.78	218	170	24	370	7.7	3
AUG.									
07...	.2	6.2	.75	181	140	22	320	7.7	7
14...	.2	4.8	.67	202	150	20	340	7.6	3
21...	.1	2.4	.35	176	140	21	300	7.5	17
28...	.2	6.1	.85	209	160	24	370	7.4	3
SEP.									
04...	.2	5.7	.81	216	170	24	360	7.5	7
11...	.2	4.0	.84	209	160	16	370	7.6	3
18...	.2	5.9	.63	176	130	22	300	7.5	15
25...	.1	6.2	.58	155	100	16	260	7.5	10

01631000 SOUTH FORK SHENANDOAH RIVER AT FRONT ROYAL, VA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 to SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	415	357	244	---	322	185	280	290	104	300	379	370
2	420	312	250	---	330	190	291	292	150	309	380	390
3	420	220	260	---	329	209	280	290	165	310	390	400
4	425	190	272	---	338	205	275	295	190	311	350	360
5	440	170	270	---	340	215	277	293	185	310	340	350
6	450	194	290	196	330	220	266	310	210	330	290	370
7	450	190	286	245	---	230	253	305	205	323	320	380
8	450	194	308	160	330	225	238	307	225	320	290	370
9	425	205	298	146	310	223	244	292	240	300	270	360
10	380	170	310	160	312	225	220	310	260	340	280	370
11	370	190	320	174	258	215	220	328	235	340	290	370
12	380	175	310	186	253	209	195	315	250	310	280	330
13	400	190	275	204	254	210	157	320	253	301	320	320
14	400	169	282	219	240	230	160	292	270	310	340	300
15	420	151	300	220	195	230	167	319	273	330	330	310
16	407	162	285	225	149	238	170	293	---	321	350	---
17	402	140	240	---	150	240	193	261	280	370	340	320
18	415	185	260	250	160	245	199	255	270	360	270	300
19	450	200	272	245	190	250	197	220	289	330	279	330
20	440	208	259	260	200	245	211	205	280	340	300	200
21	440	---	252	262	212	245	222	165	290	350	300	270
22	420	224	240	265	215	252	225	196	280	360	320	290
23	410	225	240	262	205	246	235	180	290	370	350	290
24	400	237	215	265	170	245	245	170	290	380	350	289
25	430	260	230	270	160	260	248	160	270	320	400	260
26	423	248	192	270	190	249	258	172	290	340	410	290
27	420	245	169	270	165	250	259	185	285	370	400	293
28	420	244	170	285	170	251	270	195	290	380	370	290
29	409	244	179	301	---	265	277	200	300	381	370	270
30	400	250	183	295	---	252	281	180	310	350	390	272
31	370	---	202	302	---	265	---	136	---	370	400	---
MONTH	416	212	254	238	240	233	234	249	249	337	337	321

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.0	14.0	8.0	---	0	8.0	9.0	13.0	13.0	27.0	24.0	24.0
2	16.0	14.0	8.0	---	0	8.0	12.0	15.0	16.0	26.0	24.0	23.0
3	18.0	14.0	8.0	---	0	7.0	9.0	13.0	16.0	25.0	25.0	23.0
4	16.0	13.0	9.0	---	0	5.0	10.0	12.0	18.0	24.0	26.0	23.0
5	14.0	12.0	5.0	---	1.0	4.0	11.0	14.0	18.0	23.0	24.0	24.0
6	15.0	11.0	5.0	3.0	2.0	7.0	11.0	17.0	20.0	25.0	24.0	24.0
7	16.0	11.0	3.0	2.0	---	7.0	7.0	16.0	20.0	24.0	24.0	25.0
8	17.0	11.0	2.0	1.0	1.0	5.0	9.0	15.0	21.0	25.0	23.0	24.0
9	18.0	10.0	3.0	2.0	1.0	4.0	10.0	16.0	21.0	24.0	24.0	24.0
10	19.0	11.0	4.0	1.0	1.0	7.0	10.0	17.0	20.0	25.0	25.0	24.0
11	19.0	12.0	4.0	2.0	1.0	8.0	11.0	18.0	20.0	26.0	26.0	25.0
12	18.0	13.0	4.0	3.0	4.0	6.0	11.0	19.0	21.0	23.0	24.0	25.0
13	19.0	18.0	6.0	2.0	8.0	9.0	13.0	19.0	21.0	24.0	23.0	22.0
14	19.0	13.0	4.0	3.0	4.0	9.0	11.0	15.0	21.0	25.0	23.0	23.0
15	---	13.0	5.0	5.0	3.0	9.0	11.0	15.0	22.0	24.0	23.0	22.0
16	---	11.0	4.0	3.0	3.0	10.0	11.0	17.0	---	24.0	25.0	---
17	---	8.0	4.0	---	4.0	10.0	13.0	17.0	20.0	25.0	24.0	22.0
18	---	8.0	6.0	2.0	4.0	9.0	13.0	18.0	20.0	25.0	25.0	22.0
19	---	8.0	6.0	0	6.0	9.0	14.0	17.0	21.0	25.0	24.0	22.0
20	---	8.0	7.0	1.0	8.0	8.0	15.0	20.0	22.0	23.0	24.0	21.0
21	---	---	7.0	0	8.0	7.0	15.0	18.0	22.0	22.0	25.0	23.0
22	---	7.0	6.0	2.0	9.0	8.0	14.0	20.0	23.0	23.0	24.0	20.0
23	---	8.0	7.0	3.0	8.0	8.0	12.0	17.0	24.0	24.0	23.0	20.0
24	15.0	5.0	5.0	3.0	5.0	6.0	13.0	18.0	23.0	25.0	22.0	19.0
25	15.0	3.0	5.0	5.0	8.0	6.0	12.0	19.0	24.0	25.0	21.0	18.0
26	15.0	5.0	4.0	3.0	8.0	7.0	13.0	17.0	24.0	24.0	23.0	18.0
27	15.0	4.0	4.0	0	8.0	5.0	14.0	19.0	25.0	25.0	24.0	19.0
28	15.0	5.0	6.0	0	8.0	8.0	13.0	17.0	26.0	24.0	22.0	20.0
29	13.0	7.0	3.0	0	---	10.0	15.0	18.0	27.0	24.0	23.0	20.0
30	13.0	8.0	1.0	3.0	---	9.0	13.0	15.0	26.0	24.0	23.0	21.0
31	13.0	---	2.0	1.0	---	8.0	---	19.0	---	25.0	23.0	---
MONTH	---	10.0	5.0	2.0	4.0	7.5	12.0	17.0	21.0	24.5	24.0	22.0

01634000 NORTH FORK SHENANDOAH RIVER NEAR STRASBURG, VA.

LOCATION.--Lat 38°56'36", long 78°20'11", Warren County, at gaging station on right bank at downstream side of bridge on State Highway 55, 1.5 miles southeast of Strasburg, 2.2 miles upstream from Cedar Creek, and 10 miles upstream from confluence with South Fork.

DRAINAGE AREA.--768 sq mi.

PERIOD OF RECORD.--Chemical analyses: April 1929 to March 1930, October 1948 to September 1949, October 1951 to September 1952, November 1969 to September 1971.
Water temperatures: October 1948 to September 1949.

REMARKS.--Water temperatures measured once monthly at time of sample collection.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DISCHARGE (CFS)	SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLORIDE (CL) (MG/L)
NOV. 09...	582	6.3	30	27	8.2	4.7	2.2	99	16	6.6
DEC. 15...	211	.1	0	50	17	9.5	1.8	201	20	16
JAN. 23...	657	13	10	40	10	4.8	1.7	149	18	8.6
MAR. 09...	1680	5.0	40	24	6.2	3.6	1.5	90	13	7.3
APR. 26...	360	.2	0	45	12	5.8	1.5	169	15	12
JUNE 08...	702	6.6	0	40	9.5	4.0	2.2	148	17	8.5
JULY 19...	191	2.9	10	39	15	7.0	2.7	169	16	12
AUG. 31...	167	.9	0	35	17	10	2.4	182	17	15

DATE	DISSOLVED FLUORIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)
NOV. 09...	.1	5.8	.14	128	100	20	230	7.8	11.0	15
DEC. 15...	.1	4.4	.03	214	190	30	382	7.9	3.0	5
JAN. 23...	.1	6.1	.06	175	141	19	300	7.9	4.0	5
MAR. 09...	.1	4.3	.06	109	86	12	210	7.6	4.0	10
APR. 26...	.1	2.8	.01	182	160	22	340	8.4	13.5	5
JUNE 08...	.1	5.9	.11	186	140	18	300	7.7	23.0	10
JULY 19...	.2	2.7	.02	188	160	20	320	7.6	24.5	2
AUG. 31...	.1	1.9	.00	197	160	8	350	7.9	23.5	7

01644290 STAVE RUN AT RESTON, VA.

LOCATION.--Lat 38°56'57", long 77°22'18", Fairfax County, at gaging station on left bank 0.28 mile upstream from mouth, and 1.9 miles southwest of Reston.

DRAINAGE AREA.--0.05 sq mi (33 acres).

PERIOD OF RECORD.--Chemical analyses: October 1970 to September 1971.

REMARKS.--Nine water samples were collected during the 1971 water year at monthly intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 197C TO SEPTEMBER 1971

DATE	MEAN DIS-CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS-SOLVED IRCN (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	CIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO-RIDE (CL) (MG/L)
NOV.										
04...	1.7	9.4	240	3.6	2.3	4.0	3.9	10	15	3.1
DEC.										
22...	.62	2.6	50	3.2	1.4	1.8	3.4	3	13	1.6
31...	.01	18	260	1.9	1.9	4.3	2.3	16	8.2	3.8
FEB.										
01...	.01	18	120	2.0	2.0	5.9	1.6	16	8.0	2.5
22...	.85	4.3	40	3.8	1.6	2.1	5.9	4	18	2.1
MAR.										
02...	.02	14	140	2.5	1.7	5.2	1.8	14	9.6	3.0
APR.										
09...	.01	13	230	2.6	1.8	3.3	1.9	13	8.2	2.3
28...	.01	14	240	3.1	2.3	4.2	1.1	21	6.8	3.1
JUNE										
18...	.00	13	320	3.9	1.8	4.0	1.2	18	7.0	2.2

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPECI-FIC COND-UCTANCE (MICRO-MHOS)	PH (UNITS)	TEMP-ERATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)
NOV.										
04...	.2	.5	.14	66	18	10	65	6.4	--	35
DEC.										
22...	.1	1.4	.01	42	14	12	51	5.5	--	25
31...	.0	.2	.01	57	12	0	59	5.8	.0	30
FEB.										
01...	.2	.4	.29	54	13	0	57	6.0	--	5
22...	.1	2.1	.02	64	16	12	68	5.5	--	30
MAR.										
02...	.1	.2	1.3	54	13	2	53	6.2	--	15
APR.										
09...	.1	.3	.02	45	14	4	54	6.1	10.0	35
28...	.1	.0	.05	54	17	0	61	5.9	14.0	20
JUNE										
18...	.1	1.8	.00	57	17	2	54	6.2	--	40

01644295 SMILAX BRANCH AT RESTON, VA.

LOCATION.--Lat 38°57'10", long 77°22'04", Fairfax County, at gaging station on right bank 100 ft upstream from Dulles Airport Road, 0.4 mile upstream from mouth, 1.6 miles southwest of Reston, and 4.3 miles east of Dulles International Airport.

DRAINAGE AREA.--0.32 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1969, October 1970 to September 1971.

REMARKS.--Ten water samples were collected during the 1971 water year at monthly intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DISCHARGE (CFS)	SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLORIDE (CL) (MG/L)
NOV.										
04...	2.6	10	70	4.4	2.2	7.1	2.4	8	17	8.2
DEC.										
22...	3.0	4.2	90	3.2	1.2	4.5	1.9	4	10	5.3
31...	.20	14	100	2.2	1.2	3.2	1.3	10	6.0	4.5
FEB.										
01...	.18	13	70	1.5	1.4	3.3	.9	10	5.4	3.6
22...	3.2	5.7	120	2.6	1.3	6.1	2.2	4	11	7.1
MAR.										
02...	.38	12	90	1.6	1.5	2.8	.7	6	7.6	3.7
APR.										
09...	.70	10	60	2.0	1.1	2.6	1.0	6	6.0	3.2
28...	.27	12	180	1.6	1.4	2.6	.6	9	4.6	3.9
JUNE										
18...	.13	12	170	2.4	1.3	3.7	.8	12	6.0	2.3
JULY										
23...	.00	16	120	3.8	2.7	4.3	1.5	29	6.0	2.8

DATE	DISSOLVED FLUORIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)
NOV.										
04...	.1	.1	.03	68	20	14	87	6.2	--	30
DEC.										
22...	.2	.4	.13	49	13	10	57	5.2	--	40
31...	.1	.0	.00	42	10	2	42	6.2	.0	10
FEB.										
01...	.0	.1	.00	35	10	2	41	6.1	--	10
22...	.2	1.6	.23	56	12	8	65	5.4	--	30
MAR.										
02...	.1	.0	.00	38	10	5	40	6.1	--	20
APR.										
09...	.1	.0	.02	29	10	4	39	5.8	10.0	10
28...	.1	.1	.00	38	10	2	39	6.0	11.5	25
JUNE										
18...	.1	.0	.02	44	12	2	39	6.3	--	30
JULY										
23...	.1	.5	.04	65	20	0	70	7.1	--	45

01664000 RAPPAHANNOCK RIVER AT REMINGTON, VA.

LOCATION.--Lat 38°31'50", long 77°48'50", Fauquier County, at gaging station on left bank 80 ft upstream from bridge on U.S. Highway 29 at Remington, 0.3 mile upstream from Tinpot Run, 0.4 mile downstream from Ruffans Run, 2.5 miles downstream from Hazel River, and at mile 35.2.

DRAINAGE AREA.--620 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1951 to September 1956, October 1965 to September 1971.
Water temperatures: May 1951 to September 1956, October 1965 to September 1971.
Sediment records: April 1951 to September 1971.

EXTREMES.--1970-71:
Specific conductance: Maximum daily, 140 micromhos Jan. 27; minimum daily, 49 micromhos Nov. 13.
Water temperatures: Maximum, 28.0°C July 18, Sept. 10; minimum, freezing point on several days during December to January.

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	61	62	59	62	60	55	60	57	66	65	64
2	86	60	62	57	63	59	55	58	58	65	66	65
3	84	61	62	56	65	63	57	57	51	63	67	69
4	86	70	64	56	64	64	59	58	54	64	54	64
5	86	68	63	59	67	65	60	58	56	64	58	65
6	88	68	61	59	64	62	58	60	57	65	59	66
7	84	68	60	60	69	61	65	61	60	64	62	65
8	82	68	60	60	68	59	61	63	58	64	63	62
9	86	65	61	60	63	59	59	63	59	60	64	63
10	84	70	61	59	61	60	56	66	58	61	63	64
11	86	70	60	58	63	56	57	63	57	63	67	66
12	84	61	61	59	62	54	58	64	58	59	70	65
13	74	49	62	58	53	60	56	67	62	61	71	61
14	70	64	63	63	52	56	58	62	63	62	70	53
15	76	69	62	64	56	56	57	64	66	61	68	57
16	88	66	61	64	57	55	60	62	67	60	66	55
17	89	65	64	60	58	53	57	63	64	62	67	59
18	92	65	60	61	57	55	60	64	65	63	68	64
19	84	65	62	104	59	56	61	64	64	62	68	54
20	81	65	62	63	57	58	58	63	65	64	69	50
21	80	68	63	60	59	58	58	65	62	69	77	51
22	68	68	62	60	58	57	57	63	64	65	71	52
23	72	64	60	60	60	55	60	64	63	66	69	52
24	72	63	60	60	58	56	59	65	63	70	67	53
25	72	61	61	60	59	57	58	67	66	71	68	55
26	73	62	64	62	58	55	57	62	64	68	67	59
27	73	63	64	140	60	56	58	63	63	69	64	60
28	74	60	63	67	58	54	60	64	62	70	65	58
29	73	61	57	67	---	57	58	52	63	71	66	59
30	72	61	57	56	---	55	59	53	65	70	67	60
31	63	---	57	56	---	55	---	54	---	68	66	---
MONTH	80	64	61	64	60	58	58	62	61	65	66	60

01664000 RAPPAHANNOCK RIVER AT REMINGTON, VA.--Continued

EXTREMES.--1970-71--Continued
Sediment concentrations: Maximum daily, 960 mg/l Feb. 14; minimum daily, 2 mg/l Dec. 7, 8, 9, 14, Aug. 20.
Sediment discharge: Maximum daily, 25,500 tons/day Feb. 14; minimum daily, 0.23 ton/day Oct. 5.

Period of record:
Specific conductance: Maximum daily, 148 micromhos Feb. 9, 1969; minimum daily, 49 micromhos Nov. 13, 1970.
Water temperatures: Maximum, 32.0°C July 3, 1966, June 30, 1969; minimum, freezing point on many days during winter period.
Sediment concentrations: Maximum daily, 1,730 mg/l Mar. 12, 1963; minimum daily, 1 mg/l on many days during each year.
Sediment discharge: Maximum daily, 32,300 tons/day Mar. 12, 1963; minimum daily, less than 0.5 ton/day on many days during each year.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.0	13.5	6.5	2.0	1.0	7.0	9.5	12.5	17.0	25.5	24.5	23.0
2	13.5	13.0	7.0	1.5	1.0	7.0	12.0	14.0	17.5	24.0	25.0	23.0
3	17.0	14.0	6.5	2.0	1.0	5.0	11.0	12.5	18.5	24.5	26.5	21.5
4	17.0	11.0	8.5	1.0	1.0	4.0	11.5	16.0	20.5	24.0	24.0	25.0
5	14.0	10.0	5.5	3.0	1.5	5.0	12.5	17.0	21.0	23.5	20.0	27.0
6	12.0	10.5	4.5	3.5	1.0	7.0	9.0	17.5	22.5	26.0	23.5	26.0
7	12.5	10.5	1.5	1.5	1.0	9.0	7.0	16.0	21.0	27.0	24.0	27.5
8	14.0	11.0	0	2.0	1.0	6.0	13.0	16.5	21.5	23.0	21.5	25.5
9	11.5	11.0	3.5	1.0	2.0	5.0	14.0	17.5	22.0	24.5	22.5	26.0
10	18.0	11.5	4.5	0.5	2.5	7.0	14.0	19.0	23.0	22.0	24.0	28.0
11	19.0	13.0	3.5	2.0	3.0	8.0	14.0	20.5	20.5	21.5	25.0	26.5
12	18.5	10.0	4.5	0	5.0	9.0	11.5	19.0	20.5	25.0	25.0	23.5
13	17.0	11.0	5.5	1.0	5.0	---	16.0	17.0	21.0	26.0	22.0	23.5
14	18.0	12.0	6.5	1.5	5.0	9.0	15.5	16.5	17.5	26.0	25.0	21.5
15	19.0	12.0	4.5	0.5	5.0	10.0	14.0	16.0	18.0	25.0	22.5	24.0
16	15.0	10.0	2.0	0	5.0	12.0	15.0	15.0	17.5	27.5	25.5	23.0
17	10.5	7.0	4.5	0	5.0	---	14.0	16.0	19.0	27.0	22.0	24.0
18	9.0	6.0	4.5	0	2.0	6.0	14.5	18.0	20.5	28.0	25.5	21.5
19	9.0	6.0	5.5	0.5	6.0	6.0	17.0	20.5	22.5	24.0	27.0	22.0
20	10.0	8.0	5.0	1.5	4.0	6.0	17.5	21.5	22.5	27.0	26.0	20.5
21	13.0	4.0	4.5	1.0	5.0	6.5	17.0	17.5	23.0	25.0	23.5	19.5
22	14.0	5.0	4.5	1.0	6.5	8.0	13.0	17.0	24.0	26.0	20.0	18.0
23	14.0	6.5	6.0	0.5	4.0	8.0	13.5	16.5	23.5	26.0	20.0	18.0
24	13.5	4.0	4.5	1.0	4.0	7.0	14.0	18.0	23.5	25.5	25.0	20.5
25	13.5	3.5	4.0	1.0	3.5	7.0	12.5	18.0	25.0	24.0	25.5	17.0
26	14.0	2.0	2.0	2.0	5.5	7.0	15.0	18.0	23.5	26.5	23.5	18.0
27	13.5	8.5	2.0	1.0	8.0	7.0	16.0	24.0	25.5	24.0	22.0	17.0
28	14.0	6.5	0	0	9.5	7.5	15.0	16.0	24.0	24.5	22.5	20.0
29	12.0	6.5	0	0	---	9.0	15.0	13.0	25.0	23.0	24.0	20.5
30	13.0	7.0	4.0	0	---	9.5	15.5	14.0	27.0	24.0	24.0	19.5
31	13.0	---	3.5	0	---	9.5	---	15.0	---	23.5	24.5	---
MONTH	14.0	9.0	4.0	1.0	3.5	7.5	13.5	17.0	21.5	25.0	23.5	22.5

01664000 RAPPAHANNOCK RIVER AT REMINGTON, VA.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

		OCTOBER			NOVEMBER			DECEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	36	5	.49	1610	142	617	475	8	10
2	33	3	.27	848	30	69	445	8	9.6
3	31	4	.33	1230	38	126	422	4	4.6
4	30	5	.41	1840	88	437	408	6	6.6
5	28	3	.23	1400	77	291	376	6	6.1
6	25	5	.34	1010	45	123	355	7	6.7
7	26	6	.42	731	8	16	337	2	1.8
8	25	4	.27	582	9	14	322	2	1.7
9	24	5	.32	479	11	14	325	2	1.8
10	25	8	.54	415	88	99	333	4	3.6
11	25	6	.41	1570	93	394	328	3	2.7
12	25	5	.34	5140	460	6380	341	8	7.4
13	76	9	1.8	5920	780	12500	443	90	108
14	54	5	.73	3150	189	1610	388	2	2.1
15	48	6	.78	3360	140	1270	336	3	2.7
16	92	6	1.5	2320	85	532	339	69	63
17	82	7	1.5	1600	38	164	1570	45	191
18	59	6	.96	1300	25	88	1270	80	274
19	47	9	1.1	1000	24	65	930	43	108
20	41	7	.77	960	24	62	794	20	43
21	52	21	2.9	1500	27	109	717	10	19
22	710	110	211	1000	30	81	2100	135	765
23	432	23	27	900	19	46	2580	157	1090
24	191	14	7.2	750	14	28	1710	90	416
25	127	8	2.7	680	9	17	1350	33	120
26	100	14	3.8	634	9	15	1150	19	59
27	89	3	.72	607	9	15	977	11	29
28	82	6	1.3	576	7	11	863	13	30
29	78	4	.84	533	26	37	745	11	22
30	101	13	3.5	505	10	14	737	9	18
31	2230	510	3070	--	--	--	747	14	28
TOTAL	5024	--	3344.47	44150	--	25244	24213	--	3450.4

		JANUARY			FEBRUARY			MARCH	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	552	11	16	535	3	4.3	1110	22	66
2	749	7	14	415	5	5.6	1030	21	58
3	755	8	16	448	7	8.5	1300	101	355
4	770	68	141	490	8	11	2530	107	731
5	1550	91	381	517	18	25	1560	37	156
6	2000	120	648	767	25	52	1470	34	135
7	1390	22	83	1080	31	90	1360	25	92
8	1080	18	52	3240	605	5290	1220	23	76
9	983	11	29	3180	500	4290	1090	12	35
10	848	12	27	1220	100	329	1000	13	35
11	828	10	22	961	43	112	964	14	36
12	764	7	14	895	32	77	898	10	24
13	777	5	10	3100	573	4800	844	9	21
14	806	21	46	9820	960	25500	806	11	24
15	1030	13	36	3040	240	1970	773	16	33
16	958	20	52	2060	205	1140	753	9	18
17	799	8	17	1590	55	236	680	9	17
18	817	7	15	1360	36	132	633	10	17
19	708	10	19	1250	36	122	671	21	38
20	629	28	48	1220	34	112	1020	35	96
21	656	4	7.1	1250	62	209	792	11	24
22	662	5	8.9	1500	34	138	691	6	11
23	771	13	27	3560	306	2940	688	7	13
24	924	23	57	2240	81	490	640	8	14
25	785	20	42	1710	65	300	590	4	6.4
26	810	4	8.7	1450	38	149	590	7	11
27	812	6	13	1420	26	100	619	8	13
28	611	6	9.9	1270	24	82	612	4	6.6
29	603	6	9.8	--	--	--	594	5	8.0
30	679	6	11	--	--	--	564	5	7.6
31	728	8	16	--	--	--	517	5	7.0
TOTAL	26834	--	1896.4	51588	--	48714.4	28609	--	2184.6

01664000 RAPPAHANNOCK RIVER AT REMINGTON, VA.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	496	7	9.4	390	7	7.4	3640	287	2820
2	495	7	9.4	382	6	6.2	2120	171	979
3	582	7	11	411	19	21	1630	120	528
4	522	7	9.9	388	13	14	1280	51	176
5	481	6	7.8	357	8	7.7	1150	48	149
6	515	7	9.7	353	6	5.7	943	40	102
7	2510	187	1270	359	7	6.8	891	110	265
8	2130	67	385	450	15	18	1530	141	582
9	1360	40	147	556	38	57	869	27	63
10	1180	17	54	425	34	39	691	32	60
11	1040	18	51	359	8	7.8	588	20	32
12	945	18	46	338	10	9.1	571	26	40
13	874	15	35	1110	160	480	784	101	214
14	804	11	24	1540	106	441	897	220	533
15	721	7	14	854	72	166	1200	285	923
16	688	9	17	2150	308	1790	1070	77	222
17	655	6	11	1970	92	489	907	25	61
18	678	8	15	1190	43	138	741	26	52
19	618	7	12	947	29	74	624	20	34
20	562	6	9.1	841	20	45	545	15	22
21	543	7	10	2430	115	755	509	11	15
22	528	6	8.6	1330	53	190	469	12	15
23	496	6	8.0	978	33	87	421	15	17
24	486	7	9.2	817	28	62	555	65	97
25	463	6	7.5	737	27	54	438	19	22
26	440	5	5.9	653	52	92	362	10	9.8
27	424	12	14	559	19	29	333	8	7.2
28	428	5	5.8	521	15	21	307	5	4.1
29	448	5	6.0	609	300	493	296	6	4.8
30	407	7	7.7	3470	810	7590	309	5	4.2
31	--	--	--	6750	920	16800	--	--	--
TOTAL	22519	--	2230.0	34224	--	29595.7	26670	--	8053.1

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	307	13	11	333	12	11	125	6	2.0
2	489	14	18	216	9	5.2	119	5	1.6
3	340	7	6.4	232	10	6.3	128	3	1.0
4	272	7	5.1	1290	121	421	121	9	2.9
5	242	12	7.8	1320	164	584	110	4	1.2
6	240	15	9.7	639	39	67	102	4	1.1
7	513	14	19	404	6	6.5	95	3	.77
8	293	14	11	301	13	11	101	4	1.1
9	230	12	7.5	238	11	7.1	97	3	.79
10	226	14	8.5	201	12	6.5	86	3	.70
11	307	13	11	181	19	9.3	83	4	.90
12	304	9	7.4	391	24	25	156	10	4.2
13	268	6	4.3	340	11	10	557	70	105
14	220	9	5.3	209	7	4.0	556	40	60
15	193	10	5.2	171	4	1.8	350	5	4.7
16	177	8	3.8	151	5	2.0	239	3	1.9
17	185	10	5.0	141	7	2.7	195	4	2.1
18	166	8	3.6	138	3	1.1	247	16	11
19	162	5	2.2	145	3	1.2	191	83	43
20	206	6	3.3	152	2	.82	556	138	207
21	209	6	3.4	139	6	2.3	666	110	198
22	164	3	1.3	122	3	.99	445	40	48
23	140	3	1.1	112	3	.91	337	21	19
24	128	3	1.0	110	4	1.2	279	10	7.5
25	133	6	2.2	99	5	1.3	239	8	5.2
26	146	5	2.0	89	4	.96	207	13	7.3
27	150	3	1.2	106	23	6.6	255	9	6.2
28	141	3	1.1	498	6	8.1	246	8	5.3
29	119	12	3.9	336	5	4.5	209	8	4.5
30	124	7	2.3	191	5	2.6	186	6	3.0
31	255	14	9.6	145	5	2.0	--	--	--
TOTAL	7049	--	184.2	9140	--	1214.98	7283	--	756.96

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)	287303
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)	127269.21

01668000 RAPPAHANNOCK RIVER NEAR FREDERICKSBURG, VA.

LOCATION.--Lat 38°19'20", long 77°31'05", Spotsylvania County, at gaging station on right bank 1.6 miles upstream from dam of Virginia Electric & Power Co., 2.2 miles downstream from Motts Run, 3.8 miles upstream from Fredericksburg, and at mile 4.4.

DRAINAGE AREA.--1,596 sq mi.

PERIOD OF RECORD.--Chemical analyses: April 1929 to March 1930, October 1955 to September 1956, February 1967 to September 1971.
Water temperatures: October 1955 to September 1956, April 1968 to September 1971.

EXTREMES.--1970-71:
Specific conductance: Maximum daily, 98 micromhos Oct. 19; minimum daily, 55 micromhos Sept. 27.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DIS-CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO-RIDE (CL) (MG/L)
OCT.										
03...	120	5.7	170	6.2	3.0	4.5	3.5	35	6.2	6.0
10...	98	5.5	20	7.2	2.4	5.1	3.2	36	4.6	4.7
17...	170	4.7	20	7.4	2.4	5.6	2.9	36	5.0	5.4
24...	682	7.7	80	4.0	2.8	4.2	4.0	23	8.0	5.7
31...	2440	9.2	80	7.1	2.1	3.8	3.2	28	5.4	5.8
NOV.										
07...	1710	11	60	6.8	2.4	3.3	2.4	20	7.4	5.7
14...	7880	8.1	140	5.6	1.8	3.1	2.9	16	10	4.2
21...	2200	11	100	5.2	1.7	3.2	4.1	19	10	4.6
28...	1050	12	170	6.0	1.8	2.9	1.4	21	5.4	4.0
DEC.										
04...	751	12	290	6.2	1.7	3.0	1.4	24	5.0	3.7
11...	605	12	40	5.2	2.4	3.5	1.2	23	6.4	4.2
18...	3430	8.5	60	6.2	2.9	3.9	3.3	19	7.4	5.9
25...	2900	11	60	5.6	2.7	3.4	2.7	19	7.8	5.4
JAN.										
01...	1500	13	10	5.4	2.1	3.4	1.5	19	9.0	4.5
08...	2790	11	0	6.0	2.4	3.3	1.9	18	10	5.0
15...	2880	11	40	7.6	2.2	3.6	1.3	20	9.0	5.5
22...	1400	13	250	6.1	2.3	3.7	1.2	20	6.8	5.4
29...	930	12	250	6.5	2.5	3.7	1.5	21	8.0	5.6
FEB.										
05...	760	12	20	5.8	1.9	3.6	1.4	20	7.8	5.4
12...	1910	11	20	5.0	2.1	3.0	1.9	16	7.6	4.8
19...	2510	12	20	5.1	2.0	2.6	1.7	17	7.8	4.2
26...	3020	12	40	4.9	2.0	2.8	1.5	17	7.6	4.2
MAR.										
12...	1800	11	0	4.8	1.9	2.9	1.1	19	6.2	4.2
19...	1270	11	10	4.4	1.8	2.9	1.1	19	5.8	4.3
APR.										
23...	1040	6.4	190	5.3	1.9	2.2	1.2	22	3.4	3.0
30...	876	4.6	0	4.8	1.8	2.1	1.1	24	1.8	3.9
MAY										
07...	724	5.4	40	6.0	2.0	2.2	1.2	26	3.8	4.1
14...	5490	7.5	40	5.6	2.2	2.2	1.5	19	6.6	3.5
21...	10600	12	20	6.2	1.9	2.5	1.1	20	7.0	2.7
28...	1250	12	0	6.6	2.0	2.8	1.2	22	7.0	3.7
JUNE										
04...	3860	11	40	5.4	1.9	3.0	1.2	19	6.6	2.9
11...	1400	13	110	6.3	2.1	3.6	2.1	24	6.0	3.0
18...	2400	12	50	7.0	2.4	3.6	1.9	26	7.6	3.8
25...	1100	13	50	6.1	2.0	3.5	1.5	26	5.4	3.5
JULY										
02...	2300	11	20	6.1	2.4	3.6	1.1	26	9.8	3.2
09...	680	11	20	5.8	2.6	3.5	2.0	24	10	3.6
16...	466	12	40	6.0	2.4	3.2	1.8	27	7.8	3.8
23...	394	10	20	6.8	2.2	3.3	2.0	30	6.0	4.3
30...	388	9.8	20	6.5	2.2	3.7	1.9	31	6.6	4.2
AUG.										
06...	2600	8.9	0	4.4	1.5	3.2	3.1	18	6.6	2.2
13...	802	12	0	5.8	1.9	3.7	2.1	27	5.4	2.9
20...	365	11	0	5.8	2.0	3.1	2.2	28	4.4	3.8
27...	387	9.2	30	5.4	1.9	3.1	2.0	27	3.8	3.5
SEP.										
03...	305	12	10	6.3	2.0	3.8	2.9	28	7.8	4.6
10...	260	8.8	0	6.2	2.0	4.3	2.1	30	6.2	4.4
17...	485	11	20	5.2	2.1	2.8	1.8	22	6.2	3.2
24...	582	12	20	4.9	2.0	2.8	1.1	20	5.4	2.6

01668000 RAPPAHANNOCK RIVER NEAR FREDERICKSBURG, VA.--Continued

EXTREMES.--1970-71--Continued
Water temperatures: Maximum, 28.0°C July 27; minimum, 1.5°C on several days during December to January.

Period of record:
Specific conductance (1955-56, 1968-71): Maximum daily, 188 micromhos Jan. 1, 1970; minimum daily, 31 micromhos Jan. 19, 1969.
Water temperatures: Maximum, 32.0°C June 28, 1969; minimum, freezing point on many days during December to January of most years.

REMARKS.--Analyses of major chemical constituents determined from samples which are collected at seven-day intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPECI-FIC COND-UCTANCE (MICRO-MHOS)	PH (UNITS)	COLOR (PLAT-INUM-COBALT UNITS)
OCT.									
03...	.1	.0	.02	64	28	0	85	7.1	10
10...	.1	.1	.00	60	28	0	86	7.5	5
17...	.1	1.1	.04	52	28	0	88	7.4	5
24...	.1	2.2	.05	55	22	2	75	6.8	20
31...	.1	1.1	.05	59	26	3	80	6.9	20
NOV.									
07...	.1	2.2	.02	55	27	10	74	6.9	20
14...	.1	2.2	.32	62	22	8	65	6.7	80
21...	.1	2.2	.05	51	20	4	68	7.1	30
28...	.1	3.7	.02	50	22	6	65	6.9	18
DEC.									
04...	.1	4.0	.04	54	22	3	69	6.8	30
11...	.1	2.1	.01	47	23	4	63	6.8	5
18...	.1	4.1	.03	70	28	12	73	6.5	20
25...	.0	1.4	.00	74	25	10	72	6.8	30
JAN.									
01...	.1	3.3	.02	51	22	6	65	6.9	5
08...	.1	3.3	.00	59	25	10	70	6.7	15
15...	.1	2.5	.00	51	28	12	73	6.5	10
22...	.1	4.0	.00	52	24	8	71	7.1	20
29...	.1	4.6	.10	59	26	10	77	7.0	25
FEB.									
05...	.1	3.2	.00	49	22	6	73	6.5	5
12...	.1	3.5	.00	51	21	8	71	6.5	15
19...	.0	5.0	.02	49	20	6	65	6.8	15
26...	.0	4.0	.10	47	20	6	68	6.8	20
MAR.									
12...	.1	3.3	.00	49	20	4	66	6.7	0
19...	.1	2.2	.00	45	18	3	61	6.9	0
APR.									
23...	.1	.7	.01	50	21	3	63	6.9	5
30...	.1	.2	.00	43	20	0	62	6.8	5
MAY									
07...	.1	.5	.00	41	23	2	66	6.9	5
14...	.1	3.9	.01	65	23	8	73	6.5	50
21...	.1	2.2	.02	52	24	7	60	6.5	10
28...	.1	2.3	.00	52	24	6	66	6.6	5
JUNE									
04...	.1	3.8	.02	54	22	6	68	7.0	10
11...	.1	4.8	.07	72	24	4	78	7.0	35
18...	.1	4.2	.02	61	28	6	84	6.9	20
25...	.1	3.6	.00	63	23	2	77	6.8	10
JULY									
02...	.1	2.4	.02	54	25	4	68	7.4	0
09...	.1	4.3	.02	57	25	6	68	7.0	10
16...	.1	2.3	.02	66	25	3	71	7.0	15
23...	.1	.8	.00	48	26	2	74	7.1	7
30...	.1	.2	.00	48	25	0	75	7.0	5
AUG.									
06...	.2	2.5	.12	53	17	2	56	6.6	50
13...	.1	1.8	.01	53	22	0	69	6.7	7
20...	.1	.9	.01	51	22	0	70	7.1	3
27...	.1	.2	.01	51	22	0	71	6.8	7
SEP.									
03...	.1	1.0	.00	57	24	0	73	6.6	7
10...	.1	.0	.00	52	24	0	70	6.7	3
17...	.1	1.7	.00	51	22	4	63	6.7	12
24...	.1	.8	.00	46	20	4	56	6.7	12

01668000 RAPPAHANNOCK RIVER NEAR FREDERICKSBURG, VA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	62	65	65	67	66	---	62	60	76	---	77
2	86	62	65	65	68	67	---	---	61	68	67	74
3	85	61	66	67	71	63	---	64	60	74	72	73
4	86	60	69	67	73	74	---	63	68	---	67	70
5	89	66	64	60	73	---	---	63	71	---	62	---
6	85	77	66	70	63	---	---	65	---	67	56	72
7	89	74	66	78	71	---	---	66	72	72	59	71
8	90	75	63	70	71	---	---	63	68	67	---	71
9	82	71	63	72	68	---	---	---	77	68	67	73
10	96	67	64	66	69	---	---	66	73	67	66	70
11	84	64	63	68	75	70	---	67	78	---	69	75
12	96	73	61	68	71	66	---	68	74	65	67	---
13	91	69	62	68	71	64	---	67	---	69	69	74
14	85	65	66	69	83	63	---	73	77	73	---	72
15	94	63	70	73	70	61	---	71	76	70	---	70
16	86	75	71	81	63	65	---	---	72	71	73	64
17	88	74	64	82	65	62	---	75	79	72	70	63
18	87	72	73	74	67	66	---	70	84	---	70	64
19	98	71	71	74	65	61	---	67	83	71	71	---
20	93	70	68	76	71	60	---	63	---	72	70	66
21	89	68	66	75	69	76	---	60	81	73	71	67
22	87	74	66	71	75	71	60	70	75	73	---	64
23	90	73	76	66	75	---	63	---	75	74	73	62
24	75	71	68	68	73	---	62	66	77	73	72	56
25	78	69	72	71	68	---	---	67	77	---	74	57
26	80	68	73	69	68	---	62	66	76	75	73	---
27	78	66	72	74	78	---	63	65	---	73	71	55
28	81	65	68	78	75	---	60	66	77	74	66	56
29	81	61	70	77	---	---	64	---	75	74	---	58
30	79	65	71	74	---	---	62	---	75	75	77	59
31	80	---	67	67	---	---	---	63	---	66	76	---
MONTH	85	68	67	71	71	---	---	66	74	71	69	67

01668000 RAPPAHANNOCK RIVER NEAR FREDERICKSBURG, VA.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	15.5	7.5	2.5	1.5	11.5	---	13.0	20.0	26.0	---	24.0
2	---	15.5	9.5	1.5	1.5	9.5	---	---	20.0	26.0	26.0	23.0
3	---	15.5	8.5	2.5	2.5	8.5	---	14.0	20.0	25.0	27.0	23.0
4	---	14.5	10.5	2.5	2.5	5.5	---	13.0	19.0	---	27.0	24.0
5	---	12.5	7.5	2.5	2.5	---	---	15.0	20.0	---	24.0	---
6	10.5	11.5	8.5	1.5	2.5	---	---	16.0	---	24.0	25.0	25.0
7	10.5	12.5	4.5	2.5	2.5	---	---	16.0	22.0	25.0	25.0	25.0
8	12.5	10.5	1.5	3.5	2.5	---	---	16.0	22.0	26.0	---	26.0
9	20.5	12.5	5.5	3.5	4.5	---	---	---	22.0	26.0	25.0	26.0
10	21.5	12.5	2.5	2.5	2.5	---	---	17.0	21.0	26.0	26.0	25.0
11	22.5	14.5	5.5	3.5	4.5	7.0	---	17.0	22.0	---	26.0	27.0
12	21.5	15.5	1.5	2.5	3.5	8.5	---	20.0	22.0	25.0	25.0	---
13	22.5	15.5	1.5	2.5	8.5	12.0	---	20.0	---	24.0	24.0	24.0
14	21.5	15.5	4.5	4.5	2.5	12.5	---	18.0	22.0	25.0	---	23.0
15	22.5	14.5	1.5	4.5	4.5	12.0	---	18.0	22.0	25.0	---	22.0
16	21.5	12.5	1.5	3.5	4.5	13.0	---	---	19.0	25.0	25.0	22.0
17	18.5	11.5	2.5	3.5	6.5	9.5	---	16.0	18.0	26.0	25.0	22.0
18	14.5	9.5	1.5	2.5	7.5	10.5	---	17.0	19.0	---	25.0	23.0
19	16.5	9.5	1.5	1.5	5.5	8.0	---	19.0	20.0	26.0	24.0	---
20	15.5	9.5	4.5	3.5	5.5	9.0	---	21.0	---	26.0	24.0	22.0
21	15.5	9.5	6.5	2.5	10.5	11.0	---	21.0	23.0	25.0	25.0	23.0
22	17.5	9.5	7.5	2.5	9.5	9.0	15.0	19.0	23.0	24.0	---	21.0
23	19.5	9.5	6.5	2.5	7.5	---	14.0	---	24.0	25.0	23.0	20.0
24	17.5	8.5	6.5	1.5	7.5	---	13.0	18.0	24.0	25.0	24.0	19.0
25	16.5	4.5	6.5	2.5	6.5	---	---	19.0	24.0	---	23.0	18.0
26	15.5	5.5	5.5	4.5	6.5	---	13.0	19.0	26.0	27.0	24.0	---
27	16.5	5.5	4.5	2.5	9.5	---	12.0	20.0	---	28.0	24.0	19.0
28	16.5	8.5	2.5	1.5	10.5	---	13.0	19.0	26.0	26.0	23.0	19.0
29	15.5	7.5	2.5	1.5	---	---	13.0	---	27.0	26.0	---	19.0
30	15.5	9.5	2.5	2.5	---	---	13.0	---	26.0	26.0	23.0	20.0
31	15.5	---	3.5	2.5	---	---	---	19.0	---	25.0	23.0	---
MONTH	17.5	11.5	4.5	2.5	5.0	---	---	17.5	22.0	25.5	24.5	22.5

01673000 PAMUNKEY RIVER NEAR HANOVER, VA.

LOCATION.--Lat 37°46'03", long 77°19'57", Hanover-King William County line, at gaging station near center of span on downstream side of bridge on State Highway 614, 0.3 mile upstream from Mechumps Creek, 2.0 miles east of Hanover, and 7.0 miles upstream from Millpond Creek.

DRAINAGE AREA.--1,081 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1945 to September 1946, October 1951 to September 1952, February 1967 to September 1971.
Water temperatures: October 1945 to September 1946, April 1968 to September 1971.

EXTREMES.--1970-71:
Specific conductance: Maximum daily, 142 micromhos Oct. 1, 2; minimum daily, 53 micromhos Jan. 30.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DIS-CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO-RIDE (CL) (MG/L)
OCT.										
02...	31	11	50	11	4.9	7.6	3.6	35	25	6.1
09...	22	11	0	9.8	4.1	6.6	3.0	35	20	5.8
16...	32	14	70	8.8	4.0	5.9	3.3	21	27	5.7
23...	174	14	50	8.4	4.2	5.9	3.3	20	28	6.1
30...	81	13	60	8.8	3.9	5.9	3.3	21	29	6.0
NOV.										
06...	1080	15	350	5.9	3.1	5.6	1.6	23	15	5.6
13...	2780	10	60	4.6	2.5	5.5	2.5	14	16	5.1
20...	740	15	440	6.2	3.0	5.8	1.5	26	14	5.4
27...	348	14	310	7.2	3.4	5.0	3.1	22	16	6.1
DEC.										
04...	264	14	330	6.7	3.2	5.1	3.1	23	14	6.1
11...	201	14	450	6.0	2.8	5.1	3.0	25	12	5.3
18...	1660	12	390	5.4	2.5	4.6	2.9	16	12	5.9
25...	1270	12	190	4.1	2.0	3.9	1.8	12	12	5.2
JAN.										
01...	373	13	260	4.4	2.0	4.3	1.9	14	11	5.2
08...	3340	13	400	4.7	2.2	4.3	1.9	15	13	5.3
15...	1100	14	260	5.3	2.3	4.3	1.8	16	11	5.2
22...	725	15	290	5.1	2.2	4.5	1.5	19	9.8	4.5
29...	630	7.6	50	3.7	1.6	4.2	2.3	8	12	3.1
FEB.										
05...	390	10	80	3.8	1.6	3.8	2.0	10	10	4.0
12...	3730	10	40	3.7	1.7	4.0	1.9	9	11	4.0
19...	1550	12	260	3.4	2.1	4.9	1.8	12	11	3.1
26...	3890	13	130	3.6	2.2	4.6	1.6	16	9.6	3.4
MAR.										
05...	2490	12	210	3.5	2.1	5.0	1.5	18	10	3.7
12...	963	13	150	3.6	2.2	5.0	1.5	18	9.6	4.0
19...	1170	11	310	4.0	1.9	3.6	1.2	18	7.8	3.6
26...	938	11	140	4.1	1.9	3.0	1.6	15	8.6	3.1
APR.										
02...	1210	11	140	4.2	1.9	3.1	1.6	14	8.8	4.1
09...	4730	11	80	4.7	2.2	3.4	1.4	21	7.2	5.0
16...	915	11	100	4.8	2.3	4.2	1.3	22	6.8	4.8
23...	660	11	80	5.0	2.4	4.2	1.4	25	7.0	4.4
30...	550	12	80	4.8	2.1	4.4	1.7	24	8.0	3.8
MAY										
07...	510	12	140	5.0	2.0	3.4	2.0	21	8.6	3.8
14...	558	9.4	180	5.0	1.8	2.7	2.1	13	9.0	2.5
21...	2300	8.8	160	5.0	1.8	2.7	2.0	14	9.4	2.5
28...	885	14	260	5.0	2.3	4.7	1.6	24	7.4	3.7
JUNE										
04...	6730	14	280	5.6	2.3	3.8	1.6	22	9.6	3.3
11...	930	9.6	170	4.2	1.7	6.1	2.1	10	--	4.0
18...	3040	15	210	5.8	2.4	4.2	1.8	24	7.8	3.5
25...	830	15	190	5.8	2.5	5.1	1.6	27	7.6	3.9
JULY										
02...	459	15	70	6.5	2.7	4.9	1.9	26	12	3.7
09...	325	15	70	7.3	3.1	4.8	2.1	30	13	4.5
16...	321	13	50	7.8	3.1	5.1	2.3	36	10	4.8
23...	191	14	40	8.0	3.2	4.5	2.3	35	9.6	5.0
30...	293	13	70	6.0	2.6	3.5	1.6	26	11	2.6
AUG.										
06...	505	14	90	6.2	2.5	4.3	2.5	28	7.8	2.8
13...	193	14	50	6.2	2.5	4.6	2.7	27	10	2.8
20...	261	13	0	7.0	2.6	6.3	3.0	32	8.6	5.2
27...	755	14	70	5.2	2.1	4.7	2.7	20	11	4.7
SEP.										
03...	301	13	140	5.6	2.1	4.6	2.5	20	11	3.6
10...	254	13	110	5.3	2.6	3.8	2.3	16	14	4.6
17...	388	16	220	6.8	3.3	4.5	1.7	32	11	4.2
24...	250	15	120	7.0	2.8	4.8	2.3	31	9.6	5.0

01673000 PAMUNKEY RIVER NEAR HANOVER, VA.--Continued

EXTREMES.--1970-71--Continued
Water temperatures: Maximum, 26.5°C July 23-28; minimum, freezing point on several days during January.

Period of record:
Specific conductance (1968-71): Maximum daily, 142 micromhos Sept. 27-30, Oct. 1, 2, 1970; minimum daily, 53 micromhos Aug. 5, 1969, Mar. 30, 1970, Jan. 30, 1971.
Water temperatures: Maximum, 28.0°C Aug. 10, 24, 1968; minimum, freezing point on many days during winter period.

REMARKS.--Analyses of major chemical constituents determined from samples which are collected at seven-day intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	DISSOLVED FLUORIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)
OCT.									
02...	.2	.7	.05	85	48	19	142	6.9	8
09...	.2	1.5	.00	85	42	13	124	7.4	10
16...	.3	.3	.02	86	38	22	123	7.3	10
23...	.1	.1	.05	84	38	22	124	7.0	15
30...	.1	.2	.05	87	38	21	122	6.9	10
NOV.									
06...	.1	1.0	.01	67	27	8	88	6.5	30
13...	.1	1.3	.03	68	22	10	74	6.3	40
20...	.1	.7	.03	70	28	6	88	6.7	45
27...	.1	1.4	.00	74	32	14	88	6.8	20
DEC.									
04...	.1	1.2	.00	72	30	10	82	6.8	20
11...	.1	.5	.00	67	26	6	78	6.8	30
18...	.1	1.1	.02	73	24	11	72	6.5	40
25...	.1	2.0	.02	60	18	8	64	6.4	40
JAN.									
01...	.1	1.1	.02	65	19	8	69	6.6	30
08...	.1	1.9	.04	63	20	8	73	6.6	40
15...	.1	1.8	.00	63	22	10	78	6.9	25
22...	.1	1.1	.00	72	22	6	75	6.7	20
29...	.2	1.8	.12	54	16	9	54	6.3	40
FEB.									
05...	.2	1.7	.10	52	16	8	60	6.3	20
12...	.2	1.6	.07	52	16	8	60	6.4	35
19...	.2	1.0	.15	57	17	7	60	6.7	15
26...	.2	.8	.24	56	18	5	63	6.8	15
MAR.									
05...	.2	.7	.06	54	17	2	65	6.4	10
12...	.2	1.1	.19	56	18	3	64	6.9	5
19...	.1	.4	.00	52	18	3	65	7.0	25
26...	.1	.7	.02	56	18	6	62	6.5	40
APR.									
02...	.1	.6	.02	58	18	7	63	6.5	45
09...	.1	.1	.02	52	20	4	68	7.1	15
16...	.1	.1	.00	50	22	4	70	6.9	10
23...	.1	.3	.01	50	22	2	72	6.9	15
30...	.1	1.9	.00	53	20	1	68	6.7	15
MAY									
07...	.1	1.0	.00	68	20	4	70	6.6	35
14...	.1	2.8	.08	65	20	10	61	6.4	60
21...	.1	1.0	.49	66	20	8	59	6.5	60
28...	.2	1.4	.24	71	22	2	72	6.8	35
JUNE									
04...	.2	.8	.59	70	24	6	70	6.6	35
11...	.3	5.2	.20	69	18	10	57	6.6	30
18...	.1	2.0	.04	65	24	5	74	6.8	25
25...	.1	4.5	.12	65	25	3	79	6.8	25
JULY									
02...	.1	4.6	.04	70	27	6	84	6.7	15
09...	.1	1.1	.04	72	30	6	94	6.8	15
16...	.1	.4	.00	66	32	2	94	7.0	3
23...	.1	.4	.00	65	33	4	95	6.9	7
30...	.1	2.0	.02	65	26	4	73	6.7	30
AUG.									
06...	.1	.8	.00	61	26	3	72	6.9	18
13...	.1	2.2	.00	64	26	4	78	6.6	7
20...	.1	3.2	.00	69	28	2	98	6.7	3
27...	.1	.7	.15	63	22	5	74	6.5	30
SEP.									
03...	.1	.9	.21	61	23	6	72	6.5	33
10...	.1	3.5	.00	64	24	10	75	6.4	33
17...	.1	.6	.00	66	30	4	86	6.9	17
24...	.1	.9	.00	70	29	4	90	6.9	15

01673000 PAMUNKEY RIVER NEAR HANOVER, VA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	87	86	69	54	63	62	69	70	82	73	77
2	142	87	88	70	55	63	63	71	71	84	75	76
3	130	88	84	71	54	64	61	67	72	88	75	72
4	130	89	82	71	54	64	66	66	70	87	76	73
5	130	88	78	70	60	65	65	67	75	93	70	71
6	130	88	77	70	59	64	66	68	76	92	72	72
7	130	88	77	71	60	65	66	70	77	---	73	73
8	126	78	76	73	60	65	68	71	74	90	75	74
9	124	79	76	72	59	64	68	72	77	94	76	76
10	126	77	77	73	58	63	67	70	58	93	78	75
11	128	77	78	75	59	64	69	71	57	96	77	77
12	122	79	77	77	60	64	67	69	57	100	78	76
13	120	74	77	77	59	68	69	64	59	97	79	82
14	121	73	71	77	58	65	72	61	58	98	86	84
15	122	74	71	78	56	66	70	62	59	96	88	88
16	123	76	70	77	63	65	70	60	60	94	87	86
17	123	86	70	74	58	64	72	59	77	95	90	86
18	124	84	72	73	60	63	73	58	74	92	92	85
19	125	84	73	74	60	65	71	59	76	92	96	90
20	124	88	72	74	61	64	71	58	77	96	98	92
21	124	96	72	74	62	65	71	59	82	93	94	90
22	120	94	68	75	63	66	72	58	80	94	92	90
23	124	87	68	74	64	64	72	58	79	95	96	88
24	122	88	66	73	66	64	72	69	80	92	74	90
25	120	87	64	77	65	61	72	68	79	94	75	88
26	119	89	68	76	63	62	72	70	80	75	75	90
27	121	88	69	55	61	60	73	71	79	72	74	89
28	124	90	69	55	62	61	73	72	82	72	75	90
29	122	88	69	54	---	61	74	71	79	73	79	92
30	122	86	71	53	---	61	68	72	82	73	77	92
31	123	---	70	54	---	62	---	73	---	74	75	---
MONTH	125	85	74	71	60	64	69	66	73	89	81	83

01673000 PAMUNKEY RIVER NEAR HANOVER, VA.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	17.0	11.0	3.0	1.0	10.0	12.5	17.0	21.0	24.5	26.0	23.5
2	24.0	17.0	10.5	3.0	1.0	9.0	12.5	17.0	21.0	24.5	26.0	23.0
3	24.0	17.0	9.5	3.0	1.0	9.0	12.0	17.0	21.0	25.0	26.0	23.0
4	24.0	16.5	9.5	3.5	1.5	8.5	13.0	17.0	22.0	25.0	26.0	23.0
5	24.0	16.0	9.0	3.5	1.5	8.0	13.0	17.0	22.0	25.5	26.0	23.0
6	24.0	16.0	8.0	3.0	1.5	7.0	13.0	16.0	22.0	25.5	26.0	23.0
7	24.0	15.0	7.5	3.0	1.5	7.0	13.0	16.0	23.5	---	26.0	23.0
8	24.0	15.0	6.0	3.0	1.5	7.0	13.5	15.5	23.0	25.0	26.0	22.0
9	24.0	15.0	6.0	3.0	2.0	8.5	13.5	16.0	23.0	25.0	26.0	23.0
10	24.0	14.5	5.5	3.0	2.0	10.0	14.0	16.5	22.0	25.0	26.0	23.0
11	24.0	14.5	5.0	3.0	2.5	12.5	14.5	17.0	21.0	25.5	26.0	23.0
12	23.0	14.0	4.0	0	2.5	14.0	14.0	17.0	21.0	25.5	26.0	23.0
13	21.5	14.0	3.5	0	3.0	14.0	14.0	17.0	21.0	25.5	26.0	22.5
14	21.0	14.0	3.0	0	3.0	14.5	15.0	17.0	21.0	25.5	26.0	22.0
15	21.0	14.0	3.0	5.0	5.0	14.5	15.0	17.5	21.0	25.0	26.0	21.0
16	21.0	14.0	3.0	5.0	6.0	14.5	15.0	18.0	20.5	25.0	26.0	21.0
17	21.0	13.0	3.0	5.0	6.0	15.0	15.5	18.0	20.5	25.5	26.0	20.5
18	21.0	13.0	3.0	1.0	6.0	15.0	15.5	17.0	21.5	25.5	25.5	20.0
19	20.0	12.5	3.0	1.0	6.0	15.0	15.5	17.0	21.5	26.0	25.5	19.0
20	20.0	12.0	3.0	0	6.5	14.5	16.0	17.5	21.5	26.0	25.0	19.5
21	20.0	---	3.5	0	7.5	14.0	16.0	17.5	23.0	26.0	25.0	18.0
22	20.0	---	3.5	---	8.0	14.0	16.0	17.5	23.0	26.0	25.0	18.0
23	20.0	---	3.5	0	9.0	13.0	16.0	17.5	24.0	26.5	24.0	18.0
24	19.5	11.5	---	5.0	8.0	13.0	16.0	17.5	25.0	26.5	24.0	18.5
25	19.0	11.5	3.0	5.0	10.0	12.5	16.5	17.0	25.0	26.5	24.0	18.5
26	18.0	11.5	3.0	5.0	11.0	12.5	16.5	18.0	25.5	26.5	23.5	18.0
27	17.5	12.0	3.0	1.0	11.0	11.5	17.0	19.0	25.5	26.5	23.5	18.5
28	17.0	11.5	3.0	1.0	11.0	11.5	17.0	19.0	25.5	26.5	23.5	19.0
29	17.0	11.5	3.0	1.0	---	12.0	17.5	20.5	24.5	26.0	23.5	20.0
30	16.5	11.5	3.0	5.0	---	12.0	17.5	20.0	24.5	26.0	23.5	20.0
31	17.0	---	3.0	5.0	---	12.5	---	20.5	---	26.0	23.5	---
MONTH	21.0	14.0	5.0	2.5	5.0	12.0	15.0	17.5	22.5	25.5	25.0	21.0

JAMES RIVER BASIN

02012500 JACKSON RIVER AT FALLING SPRING, VA.

LOCATION.--Lat 37°52'36", long 79°58'39", Alleghany County, at gaging station on right bank 20 ft upstream from Smith Bridge, 0.8 mile south of town of Falling Spring, 1.6 miles downstream from Falling Spring Creek, and 5.5 miles north of Covington.

DRAINAGE AREA.--411 sq mi.

PERIOD OF RECORD.--Chemical analyses: April 1929 to March 1930, October 1947 to September 1948, November 1967 to September 1971.
Water temperatures: December 1968 to September 1971.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DISCHARGE (CFS)	SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLORIDE (CL) (MG/L)
OCT.										
01...	75	5.8	10	48	9.6	3.2	3.0	134	48	3.5
08...	69	5.1	20	46	9.5	3.0	2.6	134	43	3.5
22...	151	6.0	0	44	7.5	2.1	2.6	129	40	3.4
29...	76	5.2	0	45	7.5	2.7	2.1	128	34	3.8
NOV.										
05...	848	5.6	10	29	4.2	2.2	1.5	83	21	2.5
19...	358	11	0	25	3.8	2.0	1.4	79	18	3.5
DEC.										
02...	456	4.2	0	22	3.7	2.0	1.0	68	16	1.9
16...	348	3.7	0	21	3.6	1.7	1.9	66	15	2.7
23...	2900	5.2	10	15	2.2	1.1	1.4	44	8.6	1.8
30...	413	5.0	0	25	3.6	1.2	1.8	74	18	2.4
JAN.										
06...	2060	4.9	0	14	2.1	.9	.9	39	10	4.0
20...	519	4.9	0	22	3.3	1.6	1.2	66	16	3.2
27...	505	4.3	10	21	3.0	1.6	1.2	64	14	3.6
FEB.										
24...	2230	5.0	20	13	2.4	1.1	1.2	42	7.8	3.2
MAR.										
03...	1380	5.2	30	15	2.7	1.4	1.3	47	9.4	5.0
31...	596	3.6	0	18	2.7	1.6	1.1	56	13	2.5
APR.										
07...	524	3.6	0	22	3.3	1.5	1.2	66	16	2.7
14...	522	3.1	0	24	3.3	1.5	1.3	72	16	2.5
21...	329	2.4	10	27	3.7	1.3	1.3	82	16	3.2
28...	267	2.6	40	31	4.3	1.4	1.7	90	20	3.6
MAY										
05...	214	3.6	20	32	4.7	1.1	1.4	98	22	2.8
12...	386	3.7	0	22	3.2	1.2	1.2	66	11	1.6
19...	773	4.3	0	20	2.6	1.4	1.3	61	13	1.6
26...	330	4.6	0	27	3.8	1.4	1.4	82	18	2.4
JUNE										
02...	1300	5.6	20	19	2.4	1.6	1.1	61	12	1.6
09...	582	4.7	20	24	3.0	1.9	1.3	74	14	1.8
16...	373	4.2	0	28	3.8	1.5	1.2	88	15	1.8
30...	332	5.1	0	28	4.3	1.5	1.4	96	14	1.8
JULY										
07...	198	6.0	0	35	5.3	1.9	2.0	103	24	3.2
14...	155	6.1	0	31	4.7	2.1	1.3	100	16	2.4
21...	143	6.0	0	36	5.3	1.9	2.0	101	29	3.1
AUG.										
04...	284	6.2	0	30	5.1	1.6	2.2	92	23	1.8
11...	150	6.1	0	35	6.3	1.8	1.6	107	31	1.6
18...	129	6.6	0	40	6.2	2.0	2.3	112	31	2.5
25...	111	7.4	0	38	6.7	2.3	2.6	108	35	2.3
SEP.										
01...	100	7.8	0	38	7.1	2.9	2.9	106	38	2.6
08...	89	9.0	0	41	7.4	2.1	2.9	112	40	3.2
15...	269	9.3	0	52	9.7	2.8	4.1	118	70	3.2
22...	479	7.9	0	32	4.6	2.1	1.5	92	20	2.0
29...	308	5.8	50	31	4.2	2.0	1.6	93	16	4.8

02012500 JACKSON RIVER AT FALLING SPRING, VA.--Continued

EXTREMES.--1970-71:
Specific conductance: Maximum daily, 500 micromhos Oct. 2; minimum daily, 78 micromhos Feb. 23.
Water temperatures: Maximum, 27.0°C Sept. 7, 9, 10; minimum, 3.0°C Dec. 30, Jan. 20.

Period of record:
Specific conductance (1968-71): Maximum daily, 500 micromhos Oct. 2, 1970; minimum daily, 77 micromhos Dec. 31, 1969.
Water temperatures: Maximum, 29.0°C Aug. 13, 14, 1970; minimum, freezing point on several days during winter period.

REMARKS.--Analyses of major chemical constituents determined from samples which are collected at seven-day intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPECI-FIC COND-UCTANCE (MICRO-MHOS)	PH (UNITS)	COLOR (PLAT-INUM-COBALT UNITS)
OCT.									
01...	.3	.0	.05	190	160	50	327	8.0	5
08...	.3	.0	.00	177	154	44	320	8.0	8
22...	.2	.2	.02	184	140	35	295	7.7	5
29...	.2	.1	.03	159	144	38	278	7.6	5
NOV.									
05...	.1	1.5	.00	97	90	22	170	7.4	8
19...	.1	.8	.00	100	78	14	180	7.5	5
DEC.									
02...	.1	.5	.01	88	70	15	150	7.4	5
16...	.1	.0	.00	84	68	14	144	7.9	10
23...	.1	1.8	.00	64	46	10	94	7.1	10
30...	.1	1.6	.00	100	78	17	160	7.5	5
JAN.									
06...	.1	.9	.00	62	44	12	96	7.1	10
20...	.1	1.6	.00	88	68	14	149	7.3	5
27...	.1	1.0	.00	84	65	12	142	7.5	0
FEB.									
24...	.1	1.0	.00	58	42	8	94	7.1	5
MAR.									
03...	.1	.8	.01	63	48	10	100	7.4	5
31...	.1	.2	.00	68	56	10	124	7.4	0
APR.									
07...	.1	.0	.00	88	68	14	150	7.5	0
14...	.1	.0	.00	91	74	16	159	8.1	0
21...	.1	.0	.00	99	82	16	171	7.6	5
28...	.2	.0	.00	117	95	21	197	7.9	5
MAY									
05...	.2	.0	.00	119	100	19	216	7.7	5
12...	.1	.0	.00	84	68	14	148	7.4	5
19...	.1	.1	.02	72	62	12	134	7.2	5
26...	.1	.0	.00	103	82	16	165	7.5	0
JUNE									
02...	.1	.6	.01	77	58	8	132	7.8	3
09...	.1	.1	.01	96	72	12	160	7.8	0
16...	.1	.0	.00	104	84	12	177	7.7	0
30...	.1	.2	.00	115	88	9	188	7.7	5
JULY									
07...	.2	.1	.08	134	110	25	230	7.3	0
14...	.1	.0	.02	117	87	15	195	7.9	2
21...	.2	.0	.00	140	110	29	235	7.7	3
AUG.									
04...	.1	.1	.00	117	86	20	195	7.5	5
11...	.2	.1	.00	143	110	26	240	7.6	2
18...	.2	.0	.00	151	130	34	245	7.7	3
25...	.2	.0	.00	157	120	35	255	7.8	3
SEP.									
01...	.2	.0	.00	159	120	37	250	7.6	0
08...	.2	.0	.00	166	130	41	270	7.9	0
15...	.1	.8	.00	220	170	73	350	7.9	7
22...	.1	.9	.00	121	99	24	200	7.5	7
29...	.1	.0	.00	112	95	19	195	7.6	0

02012500 JACKSON RIVER AT FALLING SPRING, VA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	327	186	150	---	147	102	132	195	110	190	200	250
2	500	185	150	170	152	104	155	---	132	205	199	260
3	---	173	157	170	---	100	270	225	140	190	193	270
4	325	150	160	---	---	101	273	219	150	210	195	---
5	325	170	170	92	96	104	169	216	160	211	205	350
6	339	144	166	96	94	108	163	210	155	225	215	---
7	340	140	180	91	120	110	150	194	159	230	200	270
8	320	140	166	92	---	111	130	183	155	200	220	270
9	---	---	---	---	126	---	132	155	160	225	220	320
10	300	164	170	130	---	110	130	144	165	300	230	270
11	275	165	175	136	138	---	136	---	---	215	240	---
12	280	---	170	140	150	109	144	148	195	225	250	240
13	283	124	149	---	---	146	151	129	---	197	245	175
14	290	128	128	118	---	132	159	---	185	195	240	200
15	---	155	142	110	100	132	160	107	175	240	235	350
16	---	173	144	110	128	---	160	106	177	225	245	215
17	300	---	128	116	---	122	169	122	---	235	238	220
18	295	177	148	130	138	---	170	116	---	---	245	215
19	305	180	148	---	120	138	160	134	---	259	330	185
20	330	190	149	149	98	---	183	144	---	250	260	180
21	310	---	146	275	84	---	171	158	---	235	262	290
22	295	180	94	144	86	129	185	160	---	245	255	200
23	286	183	94	---	78	124	189	155	---	---	260	210
24	---	185	103	143	94	134	186	154	---	---	---	220
25	270	182	122	149	96	140	178	160	---	249	255	225
26	---	---	122	165	100	130	196	165	---	245	250	---
27	276	200	125	142	102	142	189	196	185	236	260	230
28	282	201	157	149	---	132	197	180	280	---	---	225
29	278	201	156	146	---	138	---	---	190	263	250	195
30	270	195	160	157	---	130	---	92	188	257	255	190
31	---	---	---	---	---	124	---	---	---	253	245	---
MONTH	---	171	146	---	---	122	171	160	---	230	238	239

02012500 JACKSON RIVER AT FALLING SPRING, VA.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.0	14.5	10.5	---	5.0	12.0	11.5	17.0	19.0	26.0	23.0	25.0
2	21.0	18.0	11.0	7.0	6.0	9.0	12.5	---	19.0	25.0	23.0	24.0
3	---	15.0	11.0	8.0	---	9.0	13.0	13.0	20.0	26.0	26.5	23.5
4	18.0	14.5	12.0	---	---	9.5	14.0	16.0	20.5	23.0	25.0	---
5	18.0	15.5	11.0	8.0	8.0	9.0	12.0	15.5	22.0	---	23.0	24.0
6	19.0	12.0	8.0	11.0	6.5	9.5	12.0	17.0	22.0	25.0	24.0	---
7	19.0	14.0	5.5	11.0	8.0	11.0	13.0	17.0	21.0	24.0	24.0	27.0
8	20.5	14.5	7.0	8.0	---	10.0	13.0	18.5	21.5	25.0	22.0	26.0
9	---	---	---	---	3.5	---	13.0	18.0	22.0	26.0	25.0	27.0
10	21.0	13.0	12.0	8.0	---	10.0	13.5	18.0	22.0	26.0	25.0	27.0
11	21.0	15.0	10.5	8.5	10.0	---	14.0	---	---	25.5	23.5	---
12	21.0	---	12.0	9.0	8.5	12.0	17.0	17.5	22.0	25.5	26.0	22.0
13	21.0	15.0	11.0	---	---	15.0	16.0	17.0	---	26.5	25.0	21.0
14	21.0	14.0	8.0	12.0	---	12.0	17.0	---	23.0	26.0	26.5	21.0
15	---	12.0	7.5	10.0	6.5	13.0	15.0	17.0	22.0	24.0	25.0	21.0
16	---	11.0	10.0	8.0	8.0	---	15.0	17.0	21.5	24.0	25.0	22.0
17	20.0	---	8.0	5.5	---	12.0	16.0	17.5	---	25.0	24.0	23.0
18	16.0	11.0	8.5	8.0	8.0	---	16.5	20.0	---	---	23.5	20.5
19	16.5	11.0	9.5	---	10.0	9.0	17.0	20.5	---	25.0	23.0	21.0
20	18.0	12.0	10.5	3.0	11.0	---	17.5	22.0	---	23.0	25.0	21.0
21	15.0	---	10.0	8.0	12.0	---	15.5	20.0	---	24.5	24.5	19.0
22	18.0	13.0	11.0	5.0	12.0	11.0	16.0	19.0	---	26.0	24.0	19.0
23	20.0	11.0	10.0	---	9.0	10.0	14.0	18.0	---	---	23.0	19.5
24	---	5.0	8.0	5.5	9.0	10.0	15.0	19.5	---	---	---	21.0
25	17.0	5.0	8.0	6.0	9.0	10.0	16.0	20.0	---	25.0	24.0	18.5
26	---	---	9.0	5.0	10.0	9.0	17.0	21.0	---	25.0	24.0	---
27	17.0	6.5	9.5	6.5	10.0	11.0	15.5	18.5	26.0	26.0	26.0	19.5
28	14.5	6.0	7.0	5.0	---	12.0	18.0	18.5	24.0	---	---	21.0
29	15.5	7.0	5.0	5.5	---	12.0	---	---	25.5	25.0	24.0	21.0
30	14.0	11.0	3.0	5.5	---	10.5	---	14.5	26.0	24.0	25.5	21.0
31	---	---	---	---	---	13.0	---	---	---	22.0	25.0	---
MONTH	---	12.0	9.0	---	---	11.0	15.0	18.0	---	25.0	24.5	22.0

02019500 JAMES RIVER AT BUCHANAN, VA.

LOCATION.--Lat 37°31'50", long 79°40'45", Botetourt County, at gaging station on left bank at Chesapeake & Ohio Railway station at Buchanan, 300 ft upstream from bridge on U.S. Highway 11, 1,000 ft upstream from Purgatory Creek, 1.5 miles downstream from Looney Creek, and at mile 301.2.

DRAINAGE AREA.--2,075 sq mi.

PERIOD OF RECORD.--Chemical analyses: April 1929 to March 1930, October 1947 to September 1948, October 1951 to September 1956, February 1967 to September 1971.
Water temperatures: October 1947 to September 1948, May 1951 to September 1956, April 1968 to September 1971.
Sediment records: May 1951 to September 1956.

EXTREMES.--1970-71:
Specific conductance: Maximum daily, 830 micromhos Oct. 12; minimum daily, 82 micromhos May 31.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.										
03...	266	6.3	40	65	9.5	74	7.8	169	54	98
10...	251	4.8	50	74	10	72	7.1	163	52	106
17...	249	5.3	40	73	10	82	6.9	171	56	120
24...	544	5.8	100	65	9.4	80	6.5	167	53	100
31...	5510	6.0	30	35	5.6	14	3.4	102	41	16
NOV.										
07...	3940	6.0	30	22	4.0	10	2.3	72	22	12
14...	5480	5.8	40	21	3.3	6.5	3.2	64	19	8.0
21...	1640	5.3	50	30	4.8	14	1.9	98	24	18
28...	1110	4.8	80	31	5.1	18	2.0	100	29	22
DEC.										
04...	1170	3.6	60	34	5.1	19	1.6	102	30	24
11...	757	3.5	60	35	6.0	31	2.4	116	40	32
18...	1060	3.5	40	35	6.0	26	4.3	112	37	26
25...	5220	5.7	50	15	2.6	5.5	2.0	54	13	3.4
JAN.										
01...	1430	5.2	60	23	4.4	19	2.9	82	29	13
08...	4250	5.2	0	18	2.8	6.3	1.4	50	16	8.2
15...	5440	5.2	0	20	3.3	9.4	1.8	53	20	13
22...	1860	5.2	50	24	6.2	10	1.5	74	21	17
29...	1820	5.2	0	22	4.1	17	2.0	77	25	16
FEB.										
05...	1710	4.9	20	24	4.3	14	2.0	76	24	14
12...	3090	5.6	10	20	3.6	8.9	1.5	63	16	12
19...	5040	5.3	10	19	3.1	6.2	1.3	58	12	9.7
26...	6020	5.4	60	15	2.7	6.1	1.4	53	12	6.2
MAR.										
05...	9250	5.7	120	12	2.5	4.3	1.3	41	12	5.6
19...	2040	4.0	20	24	4.0	12	1.7	80	21	14
26...	1820	3.2	60	25	4.1	16	2.0	81	26	17
APR.										
02...	2050	2.8	0	24	3.9	8.2	1.4	69	17	14
09...	8810	5.0	40	15	3.0	4.2	1.2	46	14	6.6
16...	2570	3.8	100	21	3.8	8.2	1.5	69	16	10
23...	1500	2.3	0	27	5.0	12	2.0	87	23	16
30...	1290	2.1	20	31	5.4	20	2.5	103	30	21
MAY										
07...	1220	3.8	20	34	5.6	16	2.1	104	26	28
14...	8040	5.4	10	16	2.8	4.5	1.2	48	13	7.5
21...	3570	5.5	0	19	3.3	5.4	1.2	62	14	8.0
28...	1570	5.0	0	24	4.3	11	1.8	81	21	14
31...	42400	5.6	20	11	2.2	1.9	1.4	32	11	1.3
JUNE										
04...	4670	5.9	0	18	3.4	4.9	1.3	61	14	7.4
11...	1940	5.0	20	27	4.3	10	1.8	87	18	13
18...	3030	5.6	40	26	4.1	10	1.8	82	19	12
25...	2480	4.4	130	27	4.5	13	2.0	87	22	14
JULY										
02...	1290	4.3	30	32	5.3	18	2.4	100	28	21
09...	837	4.6	10	34	6.7	20	2.8	129	31	19
16...	823	3.8	0	33	7.1	10	2.4	124	28	4.5
23...	602	4.8	0	46	8.5	27	3.4	134	44	36
30...	600	5.9	10	49	9.1	28	4.0	139	43	46
AUG.										
06...	1520	6.5	10	32	5.6	18	3.3	97	35	18
13...	679	4.1	20	40	6.6	21	3.0	115	34	30
20...	586	4.6	30	48	7.6	31	3.9	131	37	48
27...	438	4.5	20	47	8.5	37	4.5	142	49	51
SEP.										
03...	386	5.8	20	52	9.1	60	6.8	154	79	60
10...	352	5.6	20	55	8.8	53	6.1	146	74	60
17...	772	6.2	30	36	6.2	14	2.4	100	28	20
24...	1690	7.1	40	27	4.6	9.1	1.6	79	21	13

EXTREMES.--1970-71--Continued
Water temperatures: Maximum, 27.5°C July 9, 10; minimum, freezing point on several days during December to February.

Period of record:
Specific conductance (1952-56, 1968-71): Maximum daily, 945 micromhos Sept. 27, 1954; minimum daily, 73 micromhos Mar. 25, 1953.
Water temperatures: Maximum, 31.0°C July 5, 1955; minimum, freezing point on many days during winter period.

REMARKS.--Analyses of major chemical constituents determined from samples which are collected at seven-day intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPECI-FIC COND-UCTANCE (MICRO-MHOS)	PH (UNITS)	COLOR (PLAT-INUM-COBALT UNITS)
OCT.									
03...	.3	1.0	.16	462	202	64	780	7.5	100
10...	.3	1.3	.18	460	228	94	805	7.7	80
17...	.4	1.3	.18	452	223	83	800	7.7	80
24...	.3	1.3	.28	452	201	64	740	7.7	120
31...	.2	2.2	.08	176	110	27	295	7.5	43
NOV.									
07...	.1	.6	.16	115	71	12	195	7.7	25
14...	.1	.3	.09	99	66	14	160	7.5	25
21...	.2	.8	.01	158	95	14	260	7.4	25
28...	.2	.6	.13	170	98	16	287	7.5	45
DEC.									
04...	.2	.7	.08	181	100	0	277	7.4	20
11...	.2	.8	.13	226	110	17	370	7.6	50
18...	.2	.6	.03	203	110	20	322	7.4	50
25...	.1	.6	.00	81	48	4	125	7.1	25
JAN.									
01...	.1	.9	.00	146	76	8	230	7.4	25
08...	.1	.7	.00	86	56	15	136	7.1	10
15...	.1	1.1	.00	117	64	20	165	7.1	30
22...	.1	1.3	.00	133	86	25	200	7.5	10
29...	.1	.7	.00	134	72	9	235	7.4	30
FEB.									
05...	.1	1.6	.00	133	78	15	233	7.4	30
12...	.1	.8	.00	104	65	14	180	7.7	15
19...	.1	.8	.00	90	60	12	155	7.1	10
26...	.1	.5	.00	81	50	6	128	7.2	15
MAR.									
05...	.1	.7	.00	73	40	7	108	7.1	25
19...	.1	.1	.00	123	75	10	215	7.4	10
26...	.1	.2	.00	138	80	13	230	7.5	10
APR.									
02...	.1	.1	.01	108	76	20	196	7.2	5
09...	.0	.3	.00	78	50	12	136	7.0	10
16...	.1	.0	.00	109	68	12	175	7.4	20
23...	.1	.0	.00	145	88	16	250	7.4	15
30...	.2	.3	.00	177	100	15	302	7.5	30
MAY									
07...	.2	.5	.00	180	110	23	322	7.5	25
14...	.1	.3	.02	93	52	12	142	7.1	20
21...	.1	.0	.01	87	60	10	150	7.2	10
28...	.1	.1	.03	125	78	11	220	7.5	15
31...	.1	.4	.01	67	36	10	82	6.9	30
JUNE									
04...	.1	.4	.00	92	59	9	150	7.3	10
11...	.1	.0	.02	131	85	14	230	7.6	10
18...	.1	.3	.02	131	82	15	210	7.5	17
25...	.1	.3	.00	137	86	14	225	7.4	15
JULY									
02...	.2	.6	.03	170	100	20	270	7.5	15
09...	.2	.5	.06	189	110	7	310	7.5	35
16...	.2	.1	.00	157	110	10	269	7.4	3
23...	.2	.5	.05	246	150	40	410	7.6	27
30...	.2	.8	.06	266	160	46	480	7.4	40
AUG.									
06...	.1	.8	.10	177	100	24	280	7.3	30
13...	.2	.1	.01	203	130	33	350	7.4	22
20...	.2	.6	.07	259	150	44	440	7.7	40
27...	.2	.7	.11	308	150	36	480	7.9	50
SEP.									
03...	.3	.8	.23	372	170	40	600	7.5	55
10...	.3	1.0	.15	352	170	52	570	7.7	55
17...	.2	1.0	.05	174	120	34	290	7.4	25
24...	.1	.4	.02	127	86	22	210	7.3	25

02019500 JAMES RIVER AT BUCHANAN, VA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	700	263	326	230	218	146	195	288	94	255	420	510
2	765	235	310	260	203	144	196	278	114	270	380	580
3	780	220	315	244	258	160	210	283	132	280	370	600
4	795	195	277	268	258	138	215	295	150	290	340	530
5	789	194	280	270	233	108	229	300	165	310	273	580
6	780	173	300	259	248	132	230	320	175	340	280	670
7	771	195	291	129	143	138	245	322	185	331	260	590
8	760	195	320	136	139	149	178	331	190	340	292	530
9	772	196	330	142	137	144	136	173	195	310	311	540
10	805	207	350	156	139	146	118	158	223	250	300	570
11	800	222	370	175	149	161	120	170	230	249	340	560
12	830	186	360	180	180	179	128	175	235	200	342	550
13	820	167	381	261	190	172	142	195	234	235	350	580
14	800	160	400	194	112	175	163	142	253	225	343	650
15	800	161	390	165	102	205	175	132	270	252	390	350
16	801	183	450	132	124	206	175	134	136	269	400	280
17	800	202	328	136	132	209	180	128	194	330	420	290
18	800	260	322	138	148	210	185	130	210	390	430	320
19	770	280	303	165	155	215	205	134	195	400	429	350
20	770	293	310	170	156	220	215	146	220	400	440	380
21	785	260	273	182	155	225	226	150	235	420	450	350
22	700	263	300	200	108	210	240	140	231	400	449	210
23	565	250	167	194	114	200	250	150	240	410	450	205
24	740	267	118	214	90	215	232	155	235	400	460	210
25	763	261	125	205	108	220	253	170	225	440	459	240
26	710	275	124	196	128	230	279	185	195	449	450	250
27	682	290	130	198	136	210	270	195	205	450	480	270
28	625	287	157	196	142	220	280	220	206	445	500	280
29	620	315	195	235	---	217	279	230	236	460	480	310
30	550	310	205	235	---	225	302	195	250	480	481	310
31	295	---	230	236	---	205	---	82	---	430	520	---
MONTH	734	232	282	197	157	185	208	197	202	345	396	422

02019500 JAMES RIVER AT BUCHANAN, VA.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.5	14.5	7.5	0.5	0	8.0	10.0	15.5	14.0	25.5	24.0	23.0
2	17.0	14.0	8.0	0	0	8.0	11.0	15.0	16.0	25.0	23.0	25.0
3	18.0	14.0	8.0	0.5	0	7.5	10.5	14.0	16.5	25.5	23.5	23.0
4	17.0	11.0	8.5	0.5	0	5.0	10.0	11.5	18.0	25.0	24.5	24.0
5	15.0	10.0	8.0	1.5	0	3.5	10.0	12.5	19.5	23.5	24.0	24.0
6	15.0	9.5	6.0	2.0	1.0	5.5	10.5	13.0	22.0	25.0	23.0	24.0
7	15.5	11.0	3.5	2.5	1.0	6.5	10.0	14.5	21.0	24.0	23.5	24.0
8	16.5	9.5	2.5	2.0	1.5	5.0	8.0	16.5	21.0	25.0	23.0	24.0
9	17.5	9.5	2.5	2.5	2.0	4.0	9.5	15.5	21.0	27.5	22.5	24.0
10	19.5	10.5	3.5	3.0	0	4.0	10.5	15.0	21.0	27.5	22.5	24.0
11	19.5	11.5	4.5	2.0	0	4.5	11.0	15.5	21.0	27.0	25.0	25.0
12	19.5	12.5	6.5	4.0	1.5	6.0	10.5	16.5	22.5	23.0	24.5	24.5
13	18.5	13.0	6.5	4.0	4.0	8.5	12.0	17.0	22.5	22.0	24.5	21.5
14	19.0	12.5	6.0	4.0	2.0	10.5	13.0	16.5	22.0	23.5	23.5	20.0
15	20.0	11.5	5.0	5.0	2.0	10.5	14.0	16.0	22.5	23.0	24.0	19.0
16	18.5	9.5	4.5	4.0	3.0	10.5	14.0	15.0	19.0	23.5	25.0	20.5
17	16.5	8.5	5.0	3.0	4.0	10.0	14.0	16.5	18.5	25.0	24.5	21.0
18	13.5	7.0	4.0	1.5	4.0	8.0	14.5	16.0	19.0	25.5	23.5	22.0
19	16.5	6.5	5.0	1.5	5.0	8.0	14.5	17.5	20.0	24.0	24.0	21.5
20	13.5	9.5	5.0	0	8.5	7.0	15.0	18.0	21.5	23.0	25.5	22.0
21	13.5	9.0	5.5	0	8.0	6.5	15.0	19.0	21.5	23.0	24.5	21.5
22	14.5	8.0	5.5	1.5	8.0	6.5	14.5	18.5	21.0	23.5	25.0	19.5
23	14.0	7.0	7.0	3.5	7.0	7.0	13.5	17.5	22.0	24.0	26.5	19.0
24	15.0	4.0	6.5	3.0	5.5	6.0	13.5	17.5	22.0	24.0	23.0	18.0
25	15.0	2.0	5.5	2.5	5.0	6.0	13.5	18.5	22.5	24.0	25.0	18.5
26	15.0	2.0	3.5	3.5	5.5	5.0	12.5	18.0	24.5	24.0	22.0	19.0
27	15.0	4.0	2.0	2.0	6.5	5.5	13.0	18.5	26.0	23.5	24.0	20.0
28	14.0	5.0	1.0	0	7.5	8.0	13.0	17.0	24.0	23.5	23.5	---
29	14.0	6.0	0.5	0	---	9.0	14.0	16.0	24.5	25.0	23.5	21.0
30	14.0	7.0	0	1.0	---	9.5	13.5	13.0	25.0	23.5	22.0	21.0
31	14.0	---	1.5	1.0	---	11.0	---	12.5	---	23.5	21.5	---
MONTH	16.0	9.0	5.0	2.0	3.5	7.0	12.5	16.0	21.0	24.5	24.0	22.0

02035000 JAMES RIVER AT CARTERSVILLE, VA.
(International Hydrological Decade River Station)

LOCATION.--Lat 37°40'15", long 78°05'10", Goochland County, at gaging station on left bank 200 ft downstream from bridge on State Highway 45 between Pemberton and Cartersville, 1.8 miles downstream from Willis River, and at mile 152.4.

DRAINAGE AREA.--6,257 sq mi.

PERIOD OF RECORD.--Chemical analyses: April 1929 to March 1930, October 1947 to September 1948, January 1966 to September 1971.
Water temperatures: April 1968 to September 1971.

EXTREMES.--1970-71:
Specific conductance: Maximum daily, 459 micromhos Oct. 8; minimum daily, 55 micromhos May 30.
Water temperatures: Maximum, 28.0°C July 11, 18; minimum, freezing point on several days during January to February.

Period of record:
Specific conductance (1968-71): Maximum daily, 459 micromhos Oct. 8, 1970; minimum daily, 55 micromhos May 30, 1971.
Water temperatures: Maximum, 36.0°C July 2, 1968; minimum, -0.5°C Jan. 9, 23, 1970.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DIS-CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO-RIDE (CL) (MG/L)
OCT.										
14...	680	1.7	30	41	7.4	29	4.5	65	83	31
29...	1050	6.5	300	32	6.4	30	4.4	80	51	34
NOV.										
30...	3200	14	700	21	4.2	8.8	1.8	57	30	9.5
DEC.										
31...	4800	7.4	520	15	2.9	4.4	2.0	44	18	4.0
JAN.										
29...	4400	7.5	500	21	4.2	7.1	1.5	60	24	10
MAR.										
01...	11100	8.1	220	12	2.5	3.5	1.3	38	12	4.8
31...	6500	7.4	320	14	3.0	5.8	1.2	41	17	7.8
APR.										
30...	3960	4.8	60	15	3.4	5.5	1.3	48	15	8.6
MAY										
14...	22000	7.3	0	11	1.7	5.6	1.5	28	17	5.9
28...	5410	9.8	120	11	2.5	3.4	1.2	31	12	4.6
JULY										
01...	3880	5.8	30	19	4.0	5.8	1.6	67	14	7.4
30...	2390	6.0	10	19	4.8	7.7	2.2	69	17	4.8
AUG.										
28...	3730	13	70	10	3.1	7.3	2.5	38	11	4.9
30...	2380	6.8	40	19	4.4	9.7	2.4	64	18	11
SEP.										
30...	2700	8.5	100	22	4.4	11	1.8	58	24	16

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPECI-FIC COND-UCTANCE (MICRO-MHOS)	PH (UNITS)	COLOR (PLAT-INUM-COBALT UNITS)
OCT.									
14...	.3	6.5	.07	266	132	78	425	7.3	40
29...	.3	4.8	.09	218	110	40	370	7.5	40
NOV.									
30...	.1	2.4	.03	121	70	24	205	7.4	40
DEC.									
31...	.1	1.8	.03	82	50	14	130	7.2	30
JAN.									
29...	.1	3.2	.04	119	69	20	179	7.3	45
MAR.									
01...	.1	2.0	.07	73	40	10	111	7.2	40
31...	.1	1.6	.07	85	48	14	132	7.1	30
APR.									
30...	.1	.7	.02	81	52	12	147	7.0	10
MAY									
14...	.2	1.9	.10	83	34	12	112	7.1	25
28...	.1	3.0	.08	65	38	12	104	6.7	25
JULY									
01...	.1	1.0	.05	96	64	8	165	7.4	10
30...	.2	3.8	.07	106	68	9	155	7.3	23
AUG.									
28...	.1	2.5	.00	78	38	6	106	6.9	27
30...	.2	2.6	.08	120	66	13	190	7.5	45
SEP.									
30...	.2	5.2	.10	130	73	26	225	7.1	30

02035000 JAMES RIVER AT CARTERSVILLE, VA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	440	260	176	122	193	108	150	157	106	149	150	155
2	420	---	180	---	192	114	163	170	76	150	170	170
3	426	193	177	136	183	116	153	165	80	157	185	180
4	440	191	180	128	182	98	---	166	---	155	190	185
5	441	165	201	114	180	106	146	165	---	154	207	200
6	450	167	197	108	172	112	---	171	---	150	177	220
7	442	168	205	110	160	106	102	173	---	155	200	205
8	459	165	202	131	142	---	---	166	---	149	260	220
9	439	180	210	155	118	112	101	160	---	157	265	220
10	420	160	223	108	103	114	109	163	142	150	250	225
11	380	120	215	106	86	128	150	194	---	165	260	220
12	380	178	188	114	88	132	115	220	144	150	252	165
13	400	145	191	112	113	122	108	222	155	156	215	112
14	400	162	192	118	95	124	112	112	144	155	235	94
15	420	124	185	126	168	132	108	108	136	175	---	70
16	420	120	183	134	95	133	---	116	100	190	---	122
17	400	123	174	155	94	142	118	86	108	187	---	215
18	400	120	140	173	106	140	130	88	155	205	200	220
19	360	130	134	165	114	138	132	86	160	195	195	239
20	376	132	---	144	116	130	---	108	165	200	189	225
21	365	136	163	142	128	124	139	80	140	195	175	250
22	350	141	176	137	138	130	141	88	122	181	188	255
23	347	140	160	140	108	138	136	---	136	175	179	300
24	393	157	182	146	79	140	148	128	144	169	193	350
25	400	158	227	146	104	150	151	132	146	170	185	230
26	379	161	180	150	100	158	148	120	148	168	194	---
27	360	166	130	162	94	159	150	122	160	167	189	240
28	370	170	122	164	96	150	151	114	165	165	106	240
29	366	185	124	190	---	124	151	98	160	169	86	220
30	388	186	140	180	---	122	154	55	165	168	74	190
31	425	---	127	190	---	126	---	80	---	163	120	---
MONTH	402	159	176	140	127	128	135	134	---	168	189	205

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	15.5	8.5	1.0	0	9.0	11.0	16.0	15.0	27.0	26.0	24.0
2	19.0	---	9.0	---	0	8.0	11.5	16.5	15.5	26.5	27.0	23.5
3	21.0	15.0	9.0	1.0	0	8.0	12.0	15.0	17.5	26.0	27.0	24.0
4	19.0	14.0	9.0	1.0	0	6.0	---	14.5	---	26.0	27.5	25.5
5	18.0	12.5	7.0	3.0	0	6.0	13.5	16.0	---	26.0	25.5	25.5
6	18.0	11.5	6.5	2.0	1.5	7.0	---	16.5	---	25.5	25.0	26.0
7	17.0	12.5	4.5	3.0	1.0	6.0	10.0	16.0	---	26.0	25.0	26.0
8	20.0	11.5	4.0	2.0	1.0	---	---	16.5	---	27.0	26.0	26.5
9	21.0	12.0	4.0	2.0	1.5	6.0	12.5	18.0	---	27.0	26.0	26.0
10	22.0	13.0	5.0	2.5	1.0	6.0	12.0	17.5	23.0	27.0	27.0	26.0
11	22.5	12.5	6.0	3.5	1.0	7.0	13.0	13.0	---	28.0	27.0	26.5
12	23.0	13.0	6.0	3.5	2.0	7.5	13.0	19.0	24.0	25.5	26.5	24.0
13	22.0	12.0	7.0	3.5	4.0	8.0	15.0	18.5	24.0	25.5	25.0	21.5
14	23.0	13.0	6.0	4.0	4.0	9.5	15.0	18.0	24.0	27.5	26.0	20.5
15	22.0	11.5	6.0	4.0	3.5	11.0	14.0	17.5	23.0	26.0	---	20.5
16	19.5	10.5	5.0	3.0	3.0	11.5	---	16.0	19.5	26.0	---	22.0
17	16.0	11.0	5.5	3.5	3.5	11.0	14.0	16.5	19.5	27.0	---	23.0
18	15.0	8.5	6.0	3.0	4.5	10.0	11.0	17.0	21.0	28.0	24.5	23.5
19	14.0	9.0	5.0	2.0	6.0	9.0	16.0	18.5	21.0	27.0	20.5	23.5
20	14.0	9.5	---	2.0	7.5	8.0	---	20.0	24.0	27.5	21.0	23.5
21	15.5	10.0	6.0	1.5	8.5	8.0	17.5	19.0	19.5	25.5	26.0	23.0
22	17.0	9.5	7.0	2.0	8.5	9.0	16.5	19.0	23.0	27.0	27.0	21.0
23	17.0	8.5	7.0	3.0	8.5	8.5	15.0	---	23.5	26.0	26.0	20.0
24	16.5	16.0	7.0	3.0	7.0	8.0	15.0	19.0	23.0	26.5	25.0	20.5
25	17.0	4.0	5.5	3.0	7.0	8.0	15.0	20.0	24.5	27.5	24.0	20.0
26	17.0	4.5	5.0	4.0	7.0	7.0	15.5	20.0	25.0	27.0	24.5	---
27	16.0	5.0	5.0	1.0	7.5	6.0	15.0	20.0	26.5	27.0	24.5	20.0
28	15.0	6.0	4.0	0.5	9.0	8.5	15.0	18.0	27.0	26.5	22.0	21.0
29	15.0	7.0	4.0	0	---	8.5	16.0	15.0	26.0	26.5	22.0	21.5
30	15.0	9.0	4.0	1.5	---	9.0	16.0	13.0	25.5	26.0	21.0	21.0
31	15.0	---	1.0	2.0	---	9.0	---	16.0	---	26.0	23.5	---
MONTH	16.0	10.5	6.0	2.5	4.0	8.0	14.0	17.0	---	26.5	25.0	23.0

02037000 JAMES RIVER & KANAWHA CANAL NEAR RICHMOND, VA.

LOCATION.--Lat 37°33'52", long 77°34'28", Henrico County, at gaging station on left bank 75 ft downstream from canal bridge, 400 ft downstream from head gates, 1,200 ft north of north end of Bosher Dam on James River, 1.6 miles upstream from Huguenot Memorial Bridge, and 2.0 miles west of city limits of Richmond.

PERIOD OF RECORD.--Chemical analyses: October 1970 to September 1971.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.										
01...	731	2.4	20	35	6.6	30	4.3	62	84	28
08...	689	1.7	40	38	7.3	35	4.4	66	83	35
15...	649	2.1	10	41	8.0	33	5.0	79	79	35
22...	703	1.6	0	38	8.3	28	4.6	46	100	32
29...	745	6.3	20	42	7.3	23	4.0	30	110	27
NOV.										
05...	852	7.2	120	20	3.9	11	2.4	52	29	15
15...	820	7.6	170	13	3.1	6.8	2.1	40	16	7.6
DEC.										
02...	775	8.4	380	19	4.2	8.0	1.3	50	26	8.3
09...	820	9.0	300	19	5.1	9.3	1.9	52	30	9.4
16...	820	8.3	710	19	5.1	9.2	1.9	48	30	10
23...	884	7.9	410	15	4.1	10	3.1	50	20	11
31...	852	8.0	30	13	2.7	4.6	1.5	38	15	5.6
JAN.										
07...	900	8.3	140	9.0	2.6	6.8	2.0	24	17	9.4
14...	884	8.3	300	12	2.6	4.9	1.4	32	15	5.4
21...	868	7.9	180	16	3.2	7.0	1.4	46	18	8.6
28...	868	8.4	680	16	3.4	6.4	1.5	40	21	8.0
FEB.										
04...	868	7.1	290	20	4.5	8.2	1.6	57	23	11
11...	900	7.0	100	13	2.8	7.4	2.0	35	15	8.9
18...	920	6.8	40	11	2.0	4.1	1.4	30	11	4.1
25...	960	7.4	20	9.1	2.0	3.7	1.4	28	12	3.2
MAR.										
04...	1000	8.8	360	13	3.2	4.6	1.6	42	14	7.0
25...	900	8.0	360	16	3.2	5.9	1.4	46	18	8.6
APR.										
01...	920	7.1	180	14	3.2	5.4	1.4	45	15	7.0
08...	884	6.8	180	8.9	2.4	5.0	1.6	22	16	6.2
15...	920	7.3	160	13	2.7	3.0	1.2	35	12	7.7
22...	920	6.5	80	14	3.0	4.5	1.3	42	16	5.9
29...	868	5.7	40	15	3.5	5.0	1.3	42	21	6.4
MAY										
06...	836	5.7	40	16	3.7	5.8	1.4	49	22	6.2
13...	900	4.8	50	22	4.7	7.5	1.6	68	23	7.6
15...	940	7.0	50	10	2.4	4.1	1.5	27	17	4.3
20...	940	8.3	20	12	2.6	3.0	1.1	41	11	3.7
27...	900	8.3	20	14	2.8	3.6	1.2	45	13	3.1
JUNE										
03...	940	8.9	60	8.9	2.0	3.8	2.0	25	12	4.0
10...	960	8.8	20	13	2.7	3.5	1.4	40	13	4.2
17...	960	8.7	180	14	2.8	5.0	1.8	40	16	5.3
24...	920	4.7	60	14	3.2	4.4	1.6	52	10	4.1
JULY										
01...	852	7.6	40	17	3.9	6.7	1.6	65	12	7.6
08...	94	7.1	10	17	3.7	6.9	1.6	59	18	6.1
15...	290	7.4	0	15	4.5	7.2	1.7	57	17	6.9
22...	805	6.7	0	20	5.0	9.4	2.2	76	16	11
29...	820	6.6	10	18	4.8	6.1	2.1	65	18	4.9
AUG.										
05...	852	7.6	10	18	4.9	9.1	2.0	64	19	8.5
12...	805	7.8	0	26	6.0	14	2.8	88	21	17
19...	86	7.2	0	23	4.7	14	2.8	78	21	14
26...	689	7.5	10	18	4.2	8.1	2.4	62	18	10
28...	703	4.6	180	3.1	1.0	3.2	2.4	8	7.2	4.0
SEP.										
02...	775	8.8	40	15	3.7	6.8	2.4	49	13	8.3
09...	760	7.6	10	22	5.1	12	2.6	72	23	14
13...	884	7.6	70	8.7	2.1	6.0	3.2	27	11	7.0
16...	852	8.8	60	12	3.5	6.6	1.8	35	15	7.0
23...	836	9.4	40	24	5.5	16	2.4	78	24	19
30...	805	9.5	20	27	5.3	12	2.8	74	25	19

02037000 JAMES RIVER & KANAWHA CANAL NEAR RICHMOND, VA.--Continued

EXTREMES.--1970-71:
Specific conductance: Maximum daily, 540 micromhos Oct. 28; minimum daily, 45 micromhos Aug. 28.
Water temperatures: Maximum, 31.0°C July 11; minimum, freezing point on Jan. 2, 28, 29, Feb. 3, 4.

REMARKS.--Analyses of major chemical constituents determined from samples which are collected at seven-day intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPECI-FIC COND-UCTANCE (MICRO-MHOS)	PH (UNITS)	COLOR (PLAT-INUM-COBALT UNITS)
OCT.									
01...	.3	2.7	.10	235	125	74	399	7.6	20
08...	.3	3.2	.04	242	126	72	420	7.6	20
15...	.3	6.4	.02	266	134	70	430	7.4	25
22...	.3	6.8	.01	252	130	92	410	7.3	20
29...	.3	6.1	.01	249	140	110	400	7.0	15
NOV.									
05...	.1	2.5	.06	117	60	22	196	7.5	30
15...	.1	2.5	.13	87	45	12	139	7.4	30
DEC.									
02...	.2	3.0	.03	111	65	24	171	7.0	40
09...	.1	3.0	.02	118	69	26	183	7.6	30
16...	.2	3.6	.05	117	68	28	181	7.3	30
23...	.1	1.3	.01	106	54	14	154	7.0	30
31...	.1	.8	.00	77	44	12	114	7.0	15
JAN.									
07...	.1	1.0	.01	77	33	14	108	6.7	30
14...	.1	2.2	.00	80	40	14	104	6.9	30
21...	.1	2.3	.00	90	53	16	135	7.2	20
28...	.1	3.2	.01	91	54	21	132	7.3	45
FEB.									
04...	.1	3.3	.00	112	68	22	190	7.3	40
11...	.1	2.7	.05	90	44	16	130	7.1	25
18...	.1	2.1	.17	64	36	11	90	7.4	15
25...	.1	1.3	.05	59	30	8	89	6.7	40
MAR.									
04...	.1	1.7	.03	78	46	12	116	7.2	30
25...	.1	1.8	.02	92	53	16	142	7.4	25
APR.									
01...	.1	1.0	.00	86	47	10	132	7.1	5
08...	.1	.9	.02	74	32	14	106	6.7	35
15...	.1	.9	.01	75	42	14	108	7.1	15
22...	.1	1.2	.01	87	48	13	132	7.2	15
29...	.1	2.1	.02	90	52	18	150	7.1	10
MAY									
06...	.2	2.2	.00	97	55	15	163	7.1	10
13...	.2	3.6	.02	122	74	19	207	7.1	15
15...	.2	2.1	.07	78	35	13	114	6.7	35
20...	.1	.7	.02	71	40	7	108	6.9	10
27...	.1	1.2	.02	73	46	10	118	7.1	10
JUNE									
03...	.2	.4	.17	71	30	10	86	6.7	35
10...	.1	1.4	.00	80	44	10	114	7.3	20
17...	.1	2.3	.03	83	46	14	125	7.2	15
24...	.1	1.6	.02	82	48	6	122	7.4	10
JULY									
01...	.1	1.4	.00	96	58	5	155	7.2	10
08...	.2	2.1	.01	95	58	9	148	7.1	15
15...	.2	1.0	.01	93	56	10	146	7.2	10
22...	.2	.3	.00	113	70	8	188	7.3	3
29...	.2	2.4	.01	98	65	12	155	7.2	10
AUG.									
05...	.2	2.3	.00	107	65	12	176	7.0	10
12...	.2	3.0	.00	149	90	18	250	7.2	12
19...	.2	.5	.00	129	77	13	215	7.4	12
26...	.2	3.0	.00	117	62	12	185	7.1	17
28...	.2	.3	.06	50	12	5	45	5.9	55
SEP.									
02...	.2	1.4	.01	105	52	12	148	7.1	40
09...	.2	2.4	.00	132	76	17	210	7.3	12
13...	.2	1.2	.14	80	30	8	98	7.6	50
16...	.2	3.5	.13	91	44	16	132	6.9	40
23...	.2	1.9	.01	147	82	18	250	7.2	23
30...	.2	3.0	.02	147	90	29	240	7.3	15

02037000 JAMES RIVER & KANAWHA CANAL NEAR RICHMOND, VA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	399	300	176	116	176	100	132	145	67	155	148	155
2	400	210	171	118	183	102	144	150	94	156	159	148
3	400	250	170	116	185	114	149	147	86	140	14	160
4	400	200	170	120	190	116	154	132	92	143	160	170
5	400	196	178	116	196	94	146	159	98	146	176	185
6	420	150	180	122	180	110	144	163	100	148	170	190
7	420	142	187	108	174	130	132	166	102	152	130	185
8	420	147	194	120	138	100	106	173	108	148	160	205
9	420	146	183	138	100	100	86	170	110	150	205	210
10	420	149	182	142	110	102	96	173	114	148	240	215
11	420	154	191	122	130	106	132	184	124	149	237	225
12	420	147	195	102	126	128	150	193	128	146	250	230
13	---	109	200	103	110	128	120	207	134	138	252	98
14	426	111	192	104	116	126	106	219	136	142	250	130
15	430	130	194	102	88	129	108	114	134	146	252	129
16	430	146	181	109	129	126	107	112	121	144	240	132
17	410	124	183	120	98	128	112	89	125	140	226	114
18	398	134	182	136	90	130	114	90	114	161	227	146
19	400	130	134	158	106	136	116	100	116	170	215	205
20	400	130	136	147	110	136	124	108	149	190	210	245
21	407	134	136	134	114	130	122	112	155	191	195	250
22	410	130	148	122	122	122	132	78	144	188	185	245
23	400	136	154	124	134	128	129	88	138	180	190	250
24	370	139	154	120	100	132	134	106	122	180	180	240
25	345	142	160	124	89	142	138	112	130	175	190	330
26	302	148	201	126	104	136	142	128	140	165	185	320
27	340	160	130	112	92	140	140	118	134	161	186	225
28	540	157	125	135	95	138	142	120	150	164	45	235
29	400	161	110	140	---	136	150	118	160	155	88	240
30	370	163	116	149	---	127	146	102	154	146	122	240
31	360	---	114	173	---	128	---	72	---	155	124	---
MONTH	403	156	165	125	128	123	128	134	123	157	185	202

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	16.0	9.0	1.0	2.0	9.0	9.0	15.5	15.5	29.0	29.0	26.0
2	21.0	14.0	9.0	0	2.0	9.0	12.0	16.5	16.5	29.0	28.0	25.5
3	19.0	16.0	10.0	1.0	0	8.0	12.0	15.5	20.0	22.0	28.0	24.5
4	18.0	14.0	12.0	2.0	0	5.5	12.0	14.5	19.0	29.0	29.0	25.0
5	19.0	12.0	9.0	4.5	2.0	6.5	14.5	15.5	21.0	26.5	28.0	26.0
6	19.0	12.0	8.0	4.5	2.0	6.5	12.0	16.5	22.0	29.0	26.5	26.5
7	17.0	12.0	5.5	2.0	2.0	9.0	9.0	18.0	22.0	26.5	25.5	26.5
8	17.0	11.0	5.5	2.0	2.0	9.0	9.0	15.5	25.5	26.5	28.0	26.5
9	18.0	12.0	4.5	1.0	2.0	6.5	5.5	18.0	25.5	29.0	26.5	26.5
10	21.0	12.0	5.5	2.0	2.0	9.0	12.0	19.0	24.5	29.0	28.0	26.5
11	21.0	13.0	5.5	2.0	1.0	9.0	12.0	20.0	23.5	31.0	29.0	28.0
12	23.0	14.0	6.5	2.0	2.0	6.5	12.0	20.0	19.0	28.0	28.0	28.0
13	---	13.0	6.5	4.5	3.5	8.0	13.5	20.0	24.5	25.5	26.5	23.5
14	22.0	13.0	5.5	4.5	3.5	9.0	14.5	20.0	22.5	28.0	26.5	22.0
15	22.0	14.0	5.5	3.5	3.5	11.0	14.5	19.0	25.5	28.0	26.5	23.0
16	21.0	12.0	5.5	3.5	1.0	11.0	14.5	18.0	23.5	26.5	29.0	22.0
17	20.0	11.0	5.5	3.5	2.0	11.0	14.5	15.5	21.0	29.0	28.0	24.5
18	19.0	10.0	5.5	3.5	3.5	10.0	15.5	16.5	22.0	29.0	26.5	24.5
19	16.0	9.0	5.5	2.0	4.5	10.0	15.5	18.0	22.0	29.0	26.5	24.5
20	18.0	10.0	6.5	1.0	6.5	9.0	16.5	20.0	23.5	29.0	26.5	24.5
21	16.0	10.0	6.5	1.0	8.0	6.5	18.0	21.0	26.5	28.0	26.5	25.0
22	17.0	9.0	6.5	2.0	9.0	9.0	18.0	19.0	25.5	26.5	28.0	24.5
23	16.0	10.0	6.5	3.5	9.0	10.0	18.0	20.0	25.5	26.5	28.0	22.0
24	19.0	7.0	6.5	3.5	8.0	9.0	14.5	20.0	24.5	26.5	26.5	21.0
25	19.0	7.0	5.5	3.5	6.5	9.0	15.5	21.0	25.5	28.0	26.5	21.0
26	18.0	4.0	4.5	4.5	6.5	6.5	15.5	21.0	28.0	29.0	26.5	21.0
27	19.0	6.0	3.5	3.5	8.0	5.5	14.5	21.0	26.5	29.0	25.5	21.0
28	17.0	5.5	3.5	0	8.0	8.0	15.5	20.0	29.0	29.0	21.0	21.0
29	16.0	8.0	3.5	0	---	10.0	15.5	18.0	29.0	28.0	22.0	22.0
30	16.0	9.0	1.0	2.0	---	9.0	15.5	15.5	26.5	28.0	23.5	22.0
31	16.0	---	2.0	2.0	---	10.0	---	14.5	---	26.5	21.0	---
MONTH	18.5	11.0	6.0	2.5	4.0	8.5	13.5	18.0	23.5	28.0	26.5	24.0

02038850 HOLIDAY CREEK NEAR ANDERSONVILLE, VA.

(Hydrologic bench-mark station)

LOCATION.--Lat 37°24'55", long 78°38'10", Appomattox County, at gaging station on right bank 350 ft downstream from bridge on State Highway 614, 1.0 mile upstream from Holiday Lake, and 5.2 miles southwest of Andersonville.

DRAINAGE AREA.--8.53 sq mi.

PERIOD OF RECORD.--Chemical analyses: March 1967 to September 1971.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DISCHARGE (CFS)	SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLORIDE (CL) (MG/L)
OCT. 27...	1.2	9.6	320	3.6	1.0	3.5	1.8	19	4.2	2.0
JAN. 15...	5.0	13	430	2.1	.9	2.6	.7	14	2.0	2.5
MAR. 30...	8.0	9.8	280	2.4	1.0	2.4	.5	10	4.6	2.0
MAY 27...	4.6	12	160	2.0	1.0	2.4	.4	14	2.6	2.0
JULY 27...	2.3	12	320	2.6	1.2	2.5	.4	18	.8	2.0
SEP. 17...	3.0	13	270	2.4	1.0	3.2	.6	16	1.6	2.4

DATE	DISSOLVED FLUORIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)
OCT. 27...	.1	.2	.02	43	13	0	45	6.6	15.0	25
JAN. 15...	.1	.0	.01	37	8	0	33	6.7	.5	30
MAR. 30...	.1	.1	.02	31	10	2	30	6.6	10.0	20
MAY 27...	.1	.3	.07	35	9	0	34	6.6	16.0	10
JULY 27...	.1	.2	.02	40	12	0	34	6.8	23.0	45
SEP. 17...	.1	.2	.00	38	10	0	36	6.7	19.0	45

02052000 MEHERRIN RIVER AT EMPORIA, VA.

LOCATION.--Lat 36°41'20", long 77°32'20", Emporia City, at gaging station on left bank at downstream side of bridge on U.S. Highway 301 and 2.1 miles upstream from Falling Run.

DRAINAGE AREA.--747 sq mi.

PERIOD OF RECORD.--Chemical analyses: March 1967 to September 1971.
Water temperatures: April 1968 to September 1971.

EXTREMES.--1970-71:
Specific conductance: Maximum daily, 97 micromhos Oct. 7; minimum daily, 47 micromhos May 14.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DIS-CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO-RIDE (CL) (MG/L)
OCT.										
03...	53	10	40	6.8	3.0	6.0	2.3	45	3.0	5.2
10...	32	12	330	5.4	1.6	6.6	2.5	44	2.6	4.4
17...	40	12	160	9.2	1.4	6.7	2.5	43	3.6	4.6
24...	188	13	30	6.6	2.7	6.1	2.0	42	4.2	5.4
31...	183	15	190	5.6	2.1	5.6	2.4	39	3.6	2.9
NOV.										
07...	110	14	170	4.9	2.0	6.6	2.9	33	5.6	5.6
14...	777	10	160	3.9	1.4	4.6	3.1	16	8.2	4.5
21...	208	14	250	5.4	1.7	6.3	2.4	23	9.2	6.0
26...	155	16	160	4.9	2.2	7.4	1.3	29	7.4	6.8
28...	150	16	250	4.8	2.1	6.6	1.3	29	5.6	6.4
DEC.										
04...	144	16	260	4.6	2.1	6.5	1.3	31	3.0	6.1
11...	134	18	180	5.0	2.2	6.2	2.4	34	3.9	5.8
18...	468	17	190	5.3	2.4	6.1	2.0	30	5.8	6.2
25...	533	15	40	4.7	2.1	6.1	2.0	22	6.6	5.6
JAN.										
24...	322	17	100	4.6	2.0	5.9	1.6	27	6.0	6.5
FEB.										
05...	567	17	100	5.0	2.1	6.5	1.6	28	4.8	6.7
12...	1320	--	--	3.0	1.4	3.7	2.1	12	7.6	3.9
19...	590	15	10	3.3	1.7	5.3	1.4	18	7.2	4.5
26...	638	14	40	3.3	1.8	4.4	1.5	19	6.4	4.2
MAR.										
05...	4360	10	30	2.8	1.8	4.2	2.0	13	7.0	3.2
26...	358	14	120	5.1	2.0	4.2	1.4	24	7.0	4.6
APR.										
02...	638	14	170	4.8	1.8	4.2	1.4	22	6.8	4.0
09...	2600	13	250	4.2	1.8	3.7	1.3	19	7.4	3.6
16...	458	14	340	5.1	2.1	5.0	1.7	31	5.0	5.0
23...	358	14	260	5.1	2.2	5.4	1.6	32	5.0	5.4
MAY										
07...	283	15	40	6.2	2.2	5.7	1.4	35	5.4	6.1
14...	614	9.0	120	3.4	1.4	2.3	1.2	13	6.2	1.6
21...	748	13	70	4.5	1.7	4.8	1.4	18	6.8	3.7
28...	369	17	360	4.9	2.0	6.3	1.7	28	5.0	4.8
JUNE										
04...	720	18	40	5.1	2.3	5.5	1.5	29	9.2	3.7
11...	310	18	80	4.9	2.1	6.0	1.4	27	9.0	3.1
25...	664	17	200	5.6	2.8	7.1	1.7	32	8.0	3.6
JULY										
02...	294	17	80	6.9	2.9	5.9	1.9	38	5.4	4.3
09...	176	17	60	6.7	2.9	6.3	1.9	40	5.4	5.0
16...	124	16	20	6.6	2.7	5.3	1.7	39	4.6	4.2
23...	101	16	10	6.7	2.6	6.3	1.5	40	4.6	5.3
30...	164	17	20	6.7	2.7	6.1	1.8	38	5.8	4.8
AUG.										
13...	109	16	60	5.8	2.2	5.0	2.2	33	4.0	3.4
20...	121	17	40	6.7	2.1	6.1	2.3	38	4.4	4.6
27...	96	16	40	6.2	2.2	6.4	2.5	37	1.6	5.1
SEP.										
03...	77	15	40	6.4	2.4	7.8	2.5	36	6.4	4.1
10...	63	14	60	5.8	2.4	6.0	2.8	32	8.6	5.8
17...	148	12	80	4.9	2.0	6.3	2.1	22	6.4	4.8

02052000 MEHERRIN RIVER AT EMPORIA, VA.--Continued

EXTREMES.--1970-71--Continued
Water temperatures: Maximum, 31.0°C Aug. 23, 24, Sept. 23; minimum, 1.0°C Nov. 29, Dec. 3.

Period of record:
Specific conductance (1968-71): Maximum daily, 153 micromhos Sept. 29, 1968; minimum daily, 39 micromhos Aug. 2, 4, 1969.
Water temperatures: Maximum, 35.0°C July 14, 21, 22, 26, 1969; minimum, 1.0°C Nov. 29, Dec. 3, 1970.

REMARKS.--Analyses of major chemical constituents determined from samples which are collected at seven-day intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	DISSOLVED FLUORIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)
OCT.									
03...	.1	.2	.01	65	30	0	90	7.0	10
10...	.2	.5	.04	63	30	0	88	7.0	15
17...	.2	.3	.11	64	29	0	90	7.0	25
24...	.2	.2	.02	59	28	0	88	7.2	7
31...	.1	.2	.25	62	22	0	75	7.4	20
NOV.									
07...	.1	.0	.07	64	20	0	80	7.2	25
14...	.2	.3	.06	71	16	2	62	6.5	80
21...	.2	.0	.09	70	20	2	77	7.0	50
26...	.1	.0	.09	70	21	0	82	7.1	35
28...	.1	.0	.08	69	20	0	77	6.9	30
DEC.									
04...	.1	.0	.06	68	20	0	79	7.0	25
11...	.1	.0	.03	66	22	0	77	7.3	10
18...	.1	.1	.02	62	23	0	73	7.1	15
25...	.2	.2	.08	65	20	2	66	6.9	30
JAN.									
24...	.1	.0	.00	62	20	0	75	6.9	20
FEB.									
05...	.1	.0	.00	65	21	0	77	7.0	10
12...	--	.6	.10	--	14	4	56	6.6	70
19...	.1	.3	1.2	57	15	0	66	6.7	25
26...	.1	.1	.45	59	16	0	60	6.9	40
MAR.									
05...	.2	.3	.04	58	14	4	49	6.6	60
26...	.1	.0	.02	58	20	1	67	7.0	40
APR.									
02...	.1	.1	.01	62	20	2	63	7.0	40
09...	.1	.0	.06	63	18	2	61	6.8	25
16...	.1	.0	.12	66	21	0	76	6.9	10
23...	.1	.1	.09	65	22	0	80	7.1	10
MAY									
07...	.1	.0	.03	63	24	0	79	7.1	25
14...	.1	.6	.06	62	14	4	47	6.3	80
21...	.1	.0	.17	54	18	3	61	7.0	30
28...	.1	1.1	.05	69	20	0	78	7.5	18
JUNE									
04...	.1	.4	.01	61	22	0	67	7.1	15
11...	.1	.2	.01	--	20	0	68	7.2	10
25...	.1	.6	.03	--	26	0	73	7.3	25
JULY									
02...	.1	.4	.03	65	29	0	88	7.1	23
09...	.1	.1	.02	63	28	0	94	7.0	12
16...	.1	.4	.00	63	28	0	78	7.0	8
23...	.1	.6	.06	66	27	0	85	6.9	7
30...	.1	.2	.03	66	28	0	83	6.9	8
AUG.									
13...	.1	.3	.00	67	24	0	73	6.8	35
20...	.1	.1	.00	63	25	0	84	6.8	17
27...	.1	.0	.01	63	24	0	82	6.9	7
SEP.									
03...	.1	.0	.02	66	26	0	82	6.8	23
10...	.2	.5	.55	74	24	0	73	6.8	35
17...	.4	.6	.40	71	20	2	67	7.0	40

02052000 MEHERRIN RIVER AT EMPORIA, VA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	80	78	---	78	58	62	73	48	90	78	78
2	90	81	79	---	75	60	63	75	70	88	66	80
3	93	82	77	---	77	52	61	79	69	92	83	82
4	93	80	78	---	77	52	67	75	67	90	82	79
5	90	84	81	---	78	49	68	75	72	92	66	80
6	92	85	77	---	74	50	66	77	68	91	---	76
7	97	80	77	---	54	55	59	79	69	92	84	77
8	93	81	77	---	49	56	53	---	70	93	82	76
9	89	94	77	---	49	59	61	78	68	94	79	77
10	93	94	77	---	49	64	60	81	82	94	80	73
11	90	83	77	68	53	63	58	82	68	92	68	72
12	90	86	77	68	56	65	61	83	70	94	67	70
13	90	88	77	75	56	66	75	80	68	76	73	71
14	92	62	77	---	57	64	76	47	69	75	77	60
15	90	62	78	---	55	64	75	48	73	76	75	61
16	90	67	77	---	80	66	76	49	75	78	68	58
17	90	70	77	---	73	65	76	48	72	83	76	67
18	90	69	73	---	73	63	79	49	---	81	70	63
19	89	70	71	---	66	66	79	55	---	83	80	65
20	90	73	75	---	62	70	80	60	73	82	84	63
21	89	77	66	---	60	69	79	61	74	84	82	77
22	88	78	63	---	63	68	79	58	74	83	84	77
23	88	78	65	---	61	68	80	61	76	85	86	78
24	88	74	63	---	59	64	78	66	72	83	84	---
25	88	74	66	---	57	68	---	70	73	82	84	---
26	88	82	64	72	60	67	73	78	75	81	82	---
27	88	81	65	74	61	66	77	77	76	82	82	---
28	92	77	67	74	58	67	72	78	---	82	84	---
29	92	82	65	75	---	66	76	77	---	81	82	---
30	82	77	---	73	---	61	74	---	---	83	80	---
31	75	---	---	76	---	63	---	---	---	84	82	---
MONTH	89	78	73	---	63	62	70	69	71	85	78	---

02052000 MEHERRIN RIVER AT EMPORIA, VA.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.0	14.0	2.0	---	2.0	10.0	12.0	18.0	19.0	20.0	30.0	27.0
2	12.0	14.0	3.0	---	3.0	10.0	12.0	17.0	23.0	22.0	25.0	27.0
3	13.0	16.0	1.0	---	3.0	10.0	12.0	18.0	23.0	20.0	27.0	26.0
4	13.0	15.0	2.0	---	2.0	9.0	12.0	18.0	23.0	22.0	30.0	27.0
5	14.0	14.0	4.0	---	2.0	10.0	12.0	18.0	22.0	24.0	26.0	28.0
6	16.0	14.0	4.0	---	2.0	10.0	12.0	18.0	21.0	25.0	---	29.0
7	19.0	13.0	5.0	---	3.0	8.0	10.0	20.0	21.0	25.0	27.0	28.0
8	20.0	13.0	6.0	---	4.0	8.0	10.0	---	22.0	30.0	25.0	29.0
9	20.0	14.0	6.0	---	4.0	9.0	16.0	22.0	20.0	26.0	28.0	27.0
10	22.0	15.0	5.0	---	3.0	9.0	16.0	22.0	23.0	29.0	30.0	28.0
11	21.0	14.0	6.0	7.0	4.0	10.0	16.0	22.0	25.0	30.0	26.0	27.0
12	21.0	13.0	6.0	13.5	7.0	14.0	16.0	22.0	24.0	27.0	27.0	28.0
13	20.0	12.0	5.0	15.0	5.0	15.0	18.0	21.0	24.0	28.0	27.0	29.0
14	18.0	12.0	5.0	---	7.0	15.5	18.0	17.0	20.0	27.0	26.0	28.0
15	17.0	11.0	4.0	---	6.0	14.0	18.0	18.0	23.0	28.0	26.0	27.0
16	17.0	10.0	5.0	---	5.0	14.0	18.0	18.0	25.0	29.0	27.0	28.0
17	18.0	10.0	6.0	---	5.0	13.0	18.0	18.0	21.0	27.0	30.0	28.0
18	16.0	11.0	8.0	---	6.0	13.0	18.0	18.0	---	29.0	25.0	27.0
19	16.0	12.0	7.0	---	8.0	11.0	17.0	19.0	---	29.0	30.0	28.0
20	16.0	11.0	6.0	---	9.0	10.0	17.0	21.0	25.0	27.0	30.0	27.0
21	17.0	10.0	5.0	---	8.0	11.0	18.0	20.0	23.0	27.0	29.0	30.0
22	16.0	8.0	5.0	---	10.0	10.0	17.0	20.0	24.0	27.0	30.0	30.5
23	17.0	8.0	4.0	---	10.0	10.0	16.0	19.0	28.0	28.0	31.0	31.0
24	17.0	4.0	5.0	---	10.0	10.0	18.0	20.0	27.0	27.0	31.0	---
25	16.0	5.0	6.0	---	9.0	10.0	---	21.0	28.0	27.0	30.0	---
26	16.0	4.0	3.0	5.0	11.0	8.0	18.0	21.0	26.0	27.0	27.0	---
27	15.0	4.0	2.0	3.0	10.0	9.0	18.0	20.0	25.0	27.0	28.0	---
28	15.0	2.0	4.0	3.0	10.0	9.0	12.0	21.0	---	29.0	27.0	---
29	14.0	1.0	4.0	3.0	---	9.0	18.0	21.0	---	28.0	26.0	---
30	15.0	2.0	---	4.5	---	9.0	17.0	---	---	28.0	27.0	---
31	15.0	---	---	3.0	---	10.0	---	---	---	26.0	27.0	---
MONTH	16.5	10.0	4.5	---	6.0	10.5	15.5	19.5	23.5	26.5	28.0	---

02060500 ROANOKE (STAUNTON) RIVER AT ALTAVISTA, VA.

LOCATION.--Lat 37°06'16", long 79°17'44", Pittsylvania County, at gaging station on right bank 12 ft upstream from bridge on U.S. Highway 29, 0.3 mile south of Altavista, 0.3 mile downstream from Sycamore Creek, 3.5 miles upstream from Big Otter River, and at mile 286.5.

DRAINAGE AREA.--1,789 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1950 to September 1951, February 1953 to September 1956, March 1967 to September 1971.
Water temperatures: October 1950 to September 1951, February 1953 to September 1956, April 1968 to September 1971.
Sediment records: February 1953 to September 1956.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.										
03...	143	8.8	60	17	5.6	6.3	2.6	77	13	6.2
10...	123	5.5	10	17	6.6	6.6	2.6	77	15	6.8
17...	357	11	0	17	6.2	6.9	2.7	79	10	6.6
24...	153	14	0	19	4.6	5.2	2.8	75	9.6	6.9
31...	6240	5.3	30	15	6.6	5.8	2.7	65	11	7.3
NOV.										
07...	422	14	50	15	4.4	5.5	2.5	62	12	7.2
21...	402	13	200	14	4.2	5.1	2.6	60	11	6.9
28...	381	14	250	15	3.9	4.5	1.9	63	7.6	6.7
DEC.										
04...	1010	5.6	0	14	6.6	5.7	2.5	67	10	6.6
11...	1570	5.5	0	14	6.3	5.7	2.5	69	10	7.0
18...	433	12	190	13	4.5	5.9	3.3	54	10	7.8
JAN.										
01...	233	11	60	10	4.4	4.6	1.9	48	10	5.2
08...	6430	5.8	0	14	6.2	6.1	3.0	66	10	6.6
15...	642	14	120	12	4.1	5.3	2.2	52	9.6	2.0
22...	4090	6.0	10	12	5.2	5.7	2.3	60	9.6	6.7
29...	4940	5.8	0	14	5.9	5.6	2.6	66	10	7.6
FEB.										
05...	258	11	20	9.5	3.3	4.1	2.7	34	10	6.0
12...	2430	7.1	10	13	5.1	5.3	2.4	60	9.8	6.0
19...	978	7.5	40	12	4.8	5.0	2.3	58	8.6	6.1
26...	5500	5.3	0	13	5.1	4.9	2.2	57	7.2	6.5
MAR.										
05...	5150	5.8	0	9.4	5.0	6.0	1.9	50	11	5.2
12...	311	14	170	10	4.2	12	2.7	68	9.0	8.9
19...	4960	4.4	40	14	5.0	5.2	2.2	61	8.6	6.9
26...	274	12	90	14	4.3	5.0	2.0	55	10	7.2
APR.										
02...	1000	12	0	12	3.9	4.9	1.8	52	9.8	6.7
09...	1970	9.8	20	11	4.1	4.9	2.1	50	11	4.4
16...	735	6.2	70	13	4.3	3.7	2.0	57	7.0	5.2
23...	701	5.6	0	15	4.6	4.4	2.1	63	8.6	7.1
30...	1270	4.6	250	13	5.0	5.2	2.1	62	9.2	6.6
MAY										
07...	1550	9.6	30	15	4.6	4.5	2.2	65	8.2	5.8
14...	6170	4.5	0	13	5.3	5.3	2.9	59	10	7.5
21...	1660	8.9	20	11	4.6	4.9	2.0	53	9.8	5.2
28...	1190	10	40	15	4.1	3.8	2.9	57	11	6.1
JUNE										
04...	10400	13	50	12	4.1	4.0	2.1	54	8.4	5.1
11...	3590	4.1	0	14	5.7	6.5	2.3	68	11	8.3
18...	3460	4.2	20	16	5.7	6.7	2.2	70	11	7.4
25...	2570	4.5	0	15	6.0	6.2	1.6	69	11	8.2
29...	2650	5.0	30	6.2	2.0	1.9	4.5	25	7.4	2.0
JULY										
01...	2790	5.5	10	7.0	2.0	2.6	4.8	23	11	2.2
02...	1650	5.7	30	14	5.7	6.1	2.4	63	15	6.6
09...	3020	4.4	0	15	6.1	6.4	2.1	69	15	7.5
16...	2410	4.2	0	15	6.0	7.4	2.7	71	12	9.2
23...	978	4.4	0	16	6.0	7.8	3.0	73	12	7.1
30...	1180	4.2	10	17	6.2	6.2	2.5	70	12	8.1
AUG.										
06...	461	14	50	13	4.2	9.4	2.4	60	11	5.7
13...	2210	4.6	50	16	6.1	6.9	2.7	68	11	7.6
20...	1410	4.0	0	16	6.2	7.0	2.7	72	12	7.8
27...	1340	6.0	40	16	5.8	5.1	2.6	67	10	7.3
SEP.										
03...	866	4.7	0	16	6.6	7.7	2.9	71	12	8.3
10...	2850	4.7	0	16	6.5	8.5	2.9	72	14	8.2
17...	2800	5.0	0	16	6.8	6.0	1.8	74	11	8.6
18...	255	11	60	10	3.9	5.1	2.5	44	9.8	4.5
24...	1210	6.0	0	16	6.4	5.9	1.9	70	12	8.3

02060500 ROANOKE (STAUNTON) RIVER AT ALTAVISTA, VA.--Continued

EXTREMES.--1970-71:
Specific conductance: Maximum daily, 335 micromhos Mar. 18; minimum daily, 70 micromhos July 1.
Water temperatures: Maximum, 26.0°C Oct. 12, Sept. 11, 12; minimum, 3.0°C Feb. 8.

Period of record:
Specific conductance (1968-71): Maximum daily, 580 micromhos Jan. 17, 1969; minimum daily, 54 micromhos Aug. 18, 1955.
Water temperatures: Maximum, 30.0°C Aug. 10, 1951; minimum, freezing point on many days during winter period.

REMARKS.--Analyses of major chemical constituents determined from samples which are collected at seven-day intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPECI-FIC COND-UCTANCE (MICRO-MHOS)	PH (UNITS)	COLOR (PLAT-INUM-COBALT UNITS)
OCT.									
03...	.2	.9	.26	114	66	2	184	7.5	5
10...	.2	.5	.03	97	68	6	175	7.5	5
17...	.2	1.4	.98	104	68	3	172	7.5	8
24...	.2	1.2	.05	104	66	4	165	7.5	5
31...	.2	1.7	.02	90	64	11	167	7.2	10
NOV.									
07...	.1	1.0	.00	94	56	5	151	7.5	20
21...	.1	1.3	.14	92	52	4	144	7.4	20
28...	.1	1.4	.02	91	53	2	138	7.4	20
DEC.									
04...	.1	.4	.00	82	61	6	148	7.7	5
11...	.2	.2	.01	85	60	5	150	7.7	10
18...	.1	1.3	.10	93	51	6	116	7.2	25
JAN.									
01...	.1	.4	.00	71	43	4	106	7.4	15
08...	.1	.5	.00	88	60	6	143	7.6	10
15...	.1	2.1	.02	92	47	4	120	7.2	20
22...	.1	.6	.00	83	52	2	130	7.4	15
29...	.1	.0	.00	83	60	6	150	7.6	5
FEB.									
05...	.1	.2	.00	65	37	9	106	7.2	60
12...	.1	.6	.00	80	54	4	142	7.5	5
19...	.1	.9	.01	92	50	2	136	7.5	10
26...	.1	.4	.02	79	52	6	120	7.4	35
MAR.									
05...	.2	1.1	.22	77	44	3	118	7.5	15
12...	.2	.3	.23	94	42	0	148	7.2	5
19...	.2	.5	.02	81	55	4	138	7.6	5
26...	.1	.9	.02	87	52	8	138	7.3	10
APR.									
02...	.2	.7	.06	77	41	0	128	7.2	0
09...	.1	1.0	.25	78	44	4	130	7.1	5
16...	.1	.5	.00	78	51	4	126	7.4	10
23...	.1	1.0	.03	94	56	5	148	7.2	30
30...	.1	.3	.03	85	53	2	142	7.5	20
MAY									
07...	.2	1.7	.21	96	56	3	148	7.6	10
14...	.3	.7	.05	83	54	6	147	7.5	10
21...	.2	.9	.02	80	46	3	120	7.3	10
28...	.1	1.7	.07	104	54	8	138	7.3	40
JUNE									
04...	.2	1.3	.03	97	47	2	119	7.6	10
11...	.1	.7	.02	101	58	3	157	7.4	0
18...	.1	.8	.01	93	64	6	165	7.8	5
25...	.2	1.0	.00	93	62	6	157	7.4	5
29...	.2	2.3	.08	72	24	3	72	6.6	80
JULY									
01...	.2	2.7	.38	70	26	6	70	6.9	90
02...	.1	1.8	.03	101	58	7	148	7.5	10
09...	.2	1.0	.01	100	62	6	156	7.3	5
16...	.2	1.9	.00	96	62	4	173	7.5	3
23...	.2	1.4	.00	103	64	4	160	7.7	5
30...	.2	1.0	.00	93	68	10	170	7.5	7
AUG.									
06...	.2	1.6	.52	98	50	0	142	7.2	25
13...	.1	2.5	.02	103	65	10	160	7.2	7
20...	.1	1.1	.00	96	66	6	165	7.2	7
27...	.2	1.0	.01	95	64	9	165	7.2	7
SEP.									
03...	.1	.6	.00	105	67	9	165	7.2	9
10...	.1	.7	.00	97	66	8	167	7.2	7
17...	.2	.6	.00	92	68	8	173	7.3	7
18...	.2	2.0	.05	81	41	5	114	7.0	25
24...	.2	.8	.00	95	66	9	165	7.3	3

02060500 ROANOKE (STAUNTON) RIVER AT ALTAVISTA, VA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178	155	147	106	148	122	190	140	138	70	128	160
2	195	163	144	128	150	124	126	138	140	148	160	160
3	155	166	143	126	152	126	129	142	120	116	158	165
4	165	170	148	107	140	120	128	142	119	110	150	---
5	175	161	134	100	106	118	145	147	142	150	165	134
6	178	170	135	135	108	124	123	149	132	152	142	132
7	170	151	148	141	106	108	124	148	155	160	132	165
8	176	149	150	143	96	109	142	138	150	155	130	167
9	224	162	148	130	130	126	135	139	139	156	165	170
10	173	150	149	126	142	130	122	148	155	128	166	167
11	176	151	150	122	140	118	123	147	157	126	136	134
12	171	156	140	139	142	148	132	148	144	160	128	144
13	176	---	121	123	106	---	130	122	148	165	160	130
14	174	---	132	142	103	---	132	147	159	166	150	170
15	170	---	109	120	---	---	132	128	161	165	146	175
16	183	---	109	130	146	128	126	120	150	173	142	142
17	172	---	105	130	151	138	124	146	164	164	163	173
18	170	132	116	134	140	335	146	140	165	170	162	114
19	187	144	106	136	136	138	136	136	137	167	164	116
20	176	155	114	130	129	118	131	130	136	169	165	150
21	167	144	110	136	114	120	138	120	148	173	144	155
22	172	144	109	130	123	139	134	132	146	170	142	160
23	175	---	112	116	122	134	148	130	165	160	165	157
24	165	157	130	116	123	130	146	132	166	147	160	165
25	165	---	---	137	128	132	149	120	157	148	165	130
26	175	---	125	142	120	138	139	126	136	170	174	134
27	179	155	125	142	112	136	138	130	137	169	165	160
28	177	138	124	146	110	137	139	138	160	165	118	164
29	155	149	124	150	---	129	138	140	72	167	120	166
30	155	151	142	151	---	128	142	138	150	170	165	168
31	167	---	108	150	---	133	---	132	---	134	170	---
MONTH	174	---	129	131	127	135	136	137	145	153	152	153

02060500 ROANOKE (STAUNTON) RIVER AT ALTAVISTA, VA.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.5	16.5	11.0	5.0	4.0	6.0	10.5	15.0	17.5	22.0	24.0	23.0
2	20.5	16.0	12.0	5.0	4.0	6.0	10.0	14.5	17.5	20.0	22.0	23.0
3	22.0	16.0	11.0	5.0	5.0	6.0	11.0	14.0	19.0	24.0	22.0	23.0
4	22.0	16.0	11.0	6.0	5.0	6.0	12.0	14.5	19.0	24.0	24.0	---
5	20.0	15.0	9.0	6.0	4.0	7.0	12.0	15.0	19.0	24.0	21.0	22.0
6	20.0	16.0	7.0	6.0	4.0	9.0	10.0	15.0	19.0	19.5	22.0	22.0
7	20.0	15.0	10.0	6.0	4.0	8.5	10.0	15.0	18.0	20.0	25.0	23.0
8	20.0	15.0	10.0	6.0	3.0	8.0	11.5	18.0	19.0	21.0	25.0	23.0
9	20.0	15.0	10.0	6.0	4.0	7.0	11.5	---	23.0	21.0	22.5	23.0
10	22.0	15.0	10.0	5.0	4.0	6.5	12.0	16.0	19.0	24.0	23.0	23.0
11	22.0	15.0	10.0	7.0	4.5	9.5	13.0	18.0	20.0	24.0	23.0	26.0
12	26.0	15.0	12.0	7.0	4.5	10.0	14.5	18.0	25.0	19.5	25.0	26.0
13	20.0	---	12.0	7.0	5.0	---	14.0	---	25.0	20.0	22.5	21.0
14	20.0	---	10.0	7.0	5.0	---	13.0	18.0	19.0	21.0	25.0	22.0
15	20.0	---	9.0	7.0	5.0	---	14.0	18.0	18.0	21.0	25.0	23.0
16	20.0	---	10.0	5.0	4.5	9.0	15.0	18.0	17.0	20.5	25.0	23.0
17	15.0	---	9.0	5.0	4.5	6.5	17.0	17.0	17.5	24.0	21.0	23.0
18	14.0	10.0	9.0	6.0	6.0	9.0	14.5	17.0	17.5	24.0	21.0	24.0
19	17.5	10.0	9.0	5.0	7.0	8.0	15.0	17.5	22.0	21.0	24.0	24.0
20	---	13.0	9.0	5.0	9.0	10.0	15.5	17.5	22.0	21.0	24.0	23.0
21	18.0	12.0	9.0	5.0	10.5	10.0	13.0	18.0	20.0	20.0	25.0	20.0
22	18.0	12.0	10.0	5.0	9.0	8.0	14.0	17.5	22.5	21.0	25.0	20.0
23	18.0	---	9.0	5.0	8.0	7.5	14.0	17.5	22.0	21.0	23.0	20.0
24	18.0	11.0	10.0	4.0	7.0	7.0	15.0	17.5	18.0	24.0	23.0	21.5
25	18.0	---	---	7.0	7.0	7.0	15.0	19.5	19.5	24.0	24.0	20.0
26	17.0	---	6.0	5.0	7.0	11.0	14.0	18.5	24.0	22.0	24.0	20.0
27	17.0	12.0	6.0	5.0	9.0	12.0	15.0	18.0	24.0	22.0	23.0	21.0
28	17.0	12.0	6.0	5.0	9.0	12.0	18.0	15.0	18.5	22.0	23.5	23.0
29	17.0	12.0	5.0	5.0	---	9.5	17.0	17.5	21.0	22.0	22.5	21.0
30	17.0	11.0	6.0	5.0	---	9.5	15.0	17.5	19.0	21.0	23.0	20.0
31	17.0	---	5.0	4.0	---	9.5	---	18.0	---	24.0	23.0	---
MONTH	19.0	---	9.0	5.5	6.0	8.5	13.5	17.0	20.0	22.0	23.5	22.5

02066000 ROANOKE (STAUNTON) RIVER AT RANDOLPH, VA.

LOCATION.--Lat 36°54'54", long 78°44'28", Halifax County, at gaging station on right bank 14 ft downstream from bridge on State Highway 746, 2.8 miles northwest of Randolph, 3.6 miles upstream from Roanoke Creek, and at mile 227.3.

DRAINAGE AREA.--2,977 sq mi.

PERIOD OF RECORD.--Chemical analyses: April 1929 to March 1930, October 1950 to September 1956, February 1967 to September 1971.
Water temperatures: October 1950 to September 1956, April 1968 to September 1971.
Sediment records: January 1954 to September 1971.

EXTREMES, 1970-71:
Specific conductance: Maximum daily, 195 micromhos Oct. 7, 8; minimum daily, 54 micromhos May 14.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DIS- CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT.										
04...	877	9.2	10	16	6.6	10	2.8	78	12	10
11...	912	9.3	40	18	5.7	9.2	2.5	84	12	8.0
18...	1180	9.0	10	18	5.7	8.4	2.4	79	11	7.6
25...	908	6.9	0	15	5.8	7.0	2.5	72	9.2	7.5
NOV.										
01...	10100	6.0	30	12	4.6	4.8	2.8	50	9.8	8.3
08...	1470	9.3	40	10	3.6	5.0	2.3	46	10	6.1
15...	3180	11	60	8.0	2.0	6.1	2.4	29	9.8	6.3
22...	1490	11	80	11	4.2	6.5	2.0	55	10	7.8
29...	1300	6.5	170	13	5.2	6.0	1.6	63	11	7.0
DEC.										
05...	1580	9.5	50	12	4.4	8.3	1.5	58	9.8	8.1
12...	1980	9.5	0	12	4.9	8.1	3.3	60	10	7.8
19...	1660	8.0	0	12	5.0	6.1	3.2	56	13	8.3
26...	1110	11	0	10	4.4	5.3	2.9	49	6.2	5.7
JAN.										
02...	782	9.4	170	11	4.9	5.8	2.8	55	11	6.4
09...	7090	10	20	9.3	3.9	5.9	2.7	44	11	5.6
16...	1790	8.6	40	13	4.8	5.7	2.8	54	11	5.1
23...	4840	12	130	8.2	3.3	5.0	2.8	40	9.4	4.6
30...	5490	7.0	0	12	5.0	6.2	2.8	59	9.0	7.4
FEB.										
06...	1150	12	20	8.6	3.5	6.5	2.4	47	7.8	5.4
13...	4290	9.2	20	11	4.2	5.7	2.4	50	9.2	6.2
20...	2100	9.8	40	9.2	3.9	5.4	2.0	46	8.0	6.3
27...	6530	13	150	6.2	3.2	4.0	1.6	28	7.0	6.7
MAR.										
20...	5070	5.6	30	12	4.6	5.8	2.2	55	10	7.8
27...	1290	11	140	7.2	2.5	4.9	1.5	33	8.0	4.6
APR.										
03...	2210	5.6	0	11	4.7	6.2	2.8	52	9.8	8.0
10...	3530	6.5	60	10	4.2	4.4	1.9	46	8.2	8.8
17...	1580	3.6	50	10	3.7	5.7	1.6	47	7.0	6.9
24...	1450	6.4	170	11	3.9	6.1	2.2	51	8.2	7.4
MAY										
01...	1970	6.4	20	9.9	3.7	5.8	1.9	50	7.2	6.0
08...	3100	4.8	80	12	4.6	5.2	2.0	58	9.2	7.5
14...	20800	5.8	60	4.3	1.6	3.5	1.3	17	6.6	1.4
15...	12700	7.2	40	7.5	3.2	5.0	2.9	35	7.4	9.0
22...	3160	7.7	0	11	4.0	4.4	2.1	47	9.2	5.5
29...	3580	10	0	8.9	3.0	5.3	1.8	42	8.0	5.9
JUNE										
05...	9370	11	0	10	3.6	5.3	1.8	47	7.8	5.2
12...	4200	9.8	190	12	4.0	6.7	2.1	56	8.8	6.5
19...	4320	7.4	40	13	4.4	6.2	2.1	58	9.0	6.5
26...	3500	7.4	0	13	4.9	5.8	2.3	58	11	7.2
JULY										
03...	2780	8.5	200	9.7	4.9	5.5	2.3	46	13	4.9
10...	3930	12	20	8.9	3.3	5.0	2.1	40	10	3.4
17...	3140	10	50	11	4.6	8.8	2.6	56	8.6	8.5
24...	1490	8.9	100	12	4.8	8.0	2.4	59	10	8.1
31...	2180	10	20	11	4.1	7.6	2.3	54	9.8	7.9
AUG.										
07...	1670	11	80	9.8	3.7	6.5	2.2	46	8.6	5.7
14...	2370	7.7	20	13	5.0	6.3	2.6	56	11	7.1
21...	2320	7.3	10	13	5.0	5.7	2.4	60	11	7.7
28...	6740	8.0	100	5.4	2.1	3.8	2.4	24	7.0	3.7
SEP.										
04...	1570	9.2	0	12	4.6	8.8	2.8	60	9.4	8.7
11...	3600	8.8	20	11	4.0	6.2	2.7	48	9.6	4.3
13...	7170	4.6	520	4.9	1.5	3.8	2.4	19	5.8	5.3
18...	3530	8.1	0	13	5.6	6.8	2.0	60	9.0	7.3
25...	1940	12	40	10	4.6	6.0	2.6	47	8.0	6.3

02066000 ROANOKE (STAUNTON) RIVER AT RANDOLPH, VA.--Continued

EXTREMES.--1970-71--Continued
Water temperatures: Maximum, 25.0°C July 9, 29; minimum, freezing point on Dec. 30, Feb. 2.

Period of record:
Specific conductance (1950-56, 1968-71): Maximum daily, 212 micromhos Oct. 3, 1968; minimum daily, 54 micromhos May 14, 1971.
Water temperatures (1950-56, 1968-71): Maximum, 35.0°C Aug. 15, 1968; minimum, freezing point on many days during winter period.

REMARKS.--Analyses of major chemical constituents determined from samples which are collected at seven-day intervals. Sediment samples collected once weekly.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPECI-FIC COND-UCTANCE (MICRO-MHOS)	PH (UNITS)	COLOR (PLAT-INUM-COBALT UNITS)
OCT.									
04...	.2	.3	.07	119	66	2	186	7.5	5
11...	.2	.3	.02	102	69	0	170	7.6	5
18...	.2	1.1	.02	100	68	4	166	7.5	5
25...	.2	.0	.01	91	60	2	156	7.7	5
NOV.									
01...	.1	1.2	.05	74	48	7	127	7.8	30
08...	.1	.8	.12	71	40	2	122	7.5	10
15...	1.5	.6	2.3	90	28	4	122	7.0	40
22...	.1	.4	.00	80	45	0	138	7.3	15
29...	.1	.8	.05	91	54	2	139	7.6	10
DEC.									
05...	.1	.2	.05	85	48	0	136	7.3	10
12...	.1	.5	.00	87	50	1	135	7.2	5
19...	.1	.6	.00	88	50	4	126	7.4	5
26...	.1	1.0	.03	79	43	3	109	7.4	10
JAN.									
02...	.1	.5	.02	89	48	2	123	7.1	5
09...	.1	1.0	.03	72	39	3	112	6.9	20
16...	.1	3.0	.51	90	52	8	139	7.2	5
23...	.1	1.4	.01	65	36	1	100	7.0	5
30...	.1	3.4	.00	87	50	2	144	7.2	5
FEB.									
06...	.1	.9	.00	73	36	0	114	7.4	5
13...	.1	1.7	.00	75	45	4	120	7.4	5
20...	.1	1.7	.00	70	39	2	116	7.3	5
27...	.1	1.4	.01	57	28	6	82	6.9	25
MAR.									
20...	.2	.2	.00	83	50	4	128	7.1	5
27...	.1	.2	.02	61	28	2	84	7.0	10
APR.									
03...	.1	.8	.00	78	47	4	144	7.2	0
10...	.1	.4	.00	65	44	6	116	7.0	15
17...	.1	.1	.00	68	40	2	110	7.0	5
24...	.1	.0	.00	79	44	2	124	7.1	25
MAY									
01...	.1	.0	.00	71	40	0	113	7.2	10
08...	.2	.4	.03	81	49	2	132	7.4	5
14...	.2	1.0	.08	62	17	3	54	6.5	45
15...	.2	.9	.03	75	32	3	90	6.8	45
22...	.1	1.3	.03	82	44	6	118	7.1	25
29...	.1	.4	.00	74	34	0	106	7.3	15
JUNE									
05...	.1	.2	.00	67	40	2	112	7.3	5
12...	.1	.9	.15	87	46	0	128	7.7	7
19...	.1	.7	.05	85	50	3	136	7.6	5
26...	.2	1.5	.02	84	52	5	147	7.2	5
JULY									
03...	.1	1.2	.05	--	44	6	116	7.6	35
10...	.2	1.8	.25	79	36	2	88	6.9	40
17...	.1	.8	.00	80	46	0	134	7.1	3
24...	.2	.3	.00	85	50	2	148	7.2	6
31...	.1	.3	.00	88	44	0	130	7.2	7
AUG.									
07...	.2	.5	.13	76	40	2	108	7.1	23
14...	.1	1.1	.01	85	53	7	136	7.0	5
21...	.1	.4	.00	91	53	4	146	7.3	3
28...	.3	.3	.24	75	22	2	68	6.8	65
SEP.									
04...	.1	.7	.02	90	49	0	142	6.9	7
11...	.1	1.0	.01	82	44	4	120	7.0	23
13...	.1	1.0	.52	54	18	2	59	6.8	130
18...	.1	.8	.00	87	55	6	138	7.4	3
25...	.1	.8	.03	79	44	6	116	6.9	17

02066000 ROANOKE (STAUNTON) RIVER AT RANDOLPH, VA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	169	127	137	117	125	104	113	113	100	116	122	134
2	177	128	128	123	145	94	119	116	110	121	121	136
3	177	140	134	88	114	96	144	118	106	116	141	138
4	184	144	133	88	142	108	92	119	120	126	146	142
5	179	146	136	93	145	97	140	130	112	122	117	138
6	178	120	131	74	114	99	92	129	110	82	114	128
7	195	143	134	72	71	122	86	110	140	84	108	68
8	195	122	126	120	68	78	84	132	112	108	---	116
9	185	117	136	112	74	114	82	118	138	112	106	114
10	175	102	138	100	73	115	116	116	112	88	98	112
11	170	108	138	85	74	110	86	134	116	104	155	120
12	170	109	135	85	75	116	88	134	128	106	154	122
13	170	122	129	134	120	108	84	108	124	88	128	59
14	175	124	130	128	82	90	138	54	122	100	136	108
15	179	122	122	131	82	90	84	90	107	132	132	114
16	174	84	112	139	83	107	127	88	108	136	92	138
17	175	144	125	118	108	108	110	90	128	134	112	130
18	166	144	127	114	110	108	114	104	118	120	110	138
19	170	144	126	125	112	122	110	106	136	132	92	104
20	165	120	105	122	116	128	130	110	98	136	104	108
21	169	120	105	138	98	117	132	116	95	124	146	92
22	144	138	88	142	99	116	124	118	138	135	104	104
23	142	130	120	100	86	112	118	120	135	138	136	108
24	155	106	96	136	73	116	124	114	134	148	112	104
25	156	145	112	98	102	129	108	116	92	148	113	116
26	159	175	109	102	108	82	103	124	147	150	146	132
27	170	150	95	152	82	84	108	114	147	124	94	122
28	168	125	89	149	112	132	109	110	137	112	68	138
29	165	139	87	171	---	99	116	106	114	132	108	122
30	165	80	111	144	---	114	114	100	150	128	112	114
31	158	---	118	174	---	---	---	108	---	130	90	---
MONTH	170	127	120	119	100	107	110	112	121	120	117	117

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	15.0	10.0	2.0	4.0	6.0	8.0	15.0	16.0	22.0	24.0	20.0
2	19.0	15.0	10.0	3.0	0	8.0	9.0	15.0	17.0	23.0	---	21.0
3	19.0	15.0	10.0	4.0	3.0	8.0	8.0	15.0	19.0	23.0	23.0	21.0
4	18.0	15.0	10.0	5.0	4.0	5.0	8.0	15.0	20.0	23.0	23.0	21.0
5	15.0	13.0	10.0	5.0	4.0	4.0	8.0	15.0	20.0	23.0	24.0	21.0
6	15.0	12.0	8.0	5.0	3.0	6.0	8.0	16.0	22.0	24.0	24.0	21.0
7	15.0	13.0	6.0	5.0	4.0	6.0	8.0	16.0	---	24.0	24.0	20.0
8	16.0	12.0	5.0	5.0	4.0	6.0	8.0	15.0	22.0	---	---	23.0
9	16.0	12.0	7.0	4.0	3.0	8.0	8.0	15.0	20.0	25.0	23.0	23.0
10	16.0	12.0	6.0	4.0	2.0	6.0	8.0	15.0	20.0	23.0	22.0	22.0
11	17.0	13.0	6.0	5.0	5.0	7.0	11.0	16.0	20.0	24.0	23.0	22.0
12	17.0	13.0	9.0	5.0	6.0	8.0	12.0	16.0	20.0	23.0	23.0	20.0
13	17.0	13.0	8.0	5.0	9.0	9.0	11.0	16.0	20.0	23.0	23.0	19.0
14	17.0	13.0	7.0	5.0	6.0	8.0	13.0	15.0	21.0	24.0	23.0	22.0
15	17.0	11.0	7.0	5.0	7.0	8.0	14.0	16.0	20.0	24.0	23.0	---
16	16.0	12.0	7.0	5.0	7.0	7.0	14.0	15.0	19.0	24.0	23.0	---
17	15.0	9.0	6.0	3.0	6.0	8.0	11.0	15.0	18.0	23.0	23.0	---
18	13.0	9.0	7.0	3.0	6.0	7.0	15.0	16.0	18.0	24.0	23.0	22.0
19	12.0	10.0	7.0	2.0	6.0	8.0	15.0	17.0	19.0	20.0	22.0	23.0
20	13.0	10.0	8.0	4.0	7.0	---	14.0	18.0	21.0	24.0	23.0	23.0
21	15.0	10.0	8.0	5.0	8.0	8.0	15.0	18.0	22.0	24.0	24.0	23.0
22	15.0	10.0	7.0	3.0	8.0	9.0	15.0	17.0	21.0	23.0	23.0	20.0
23	15.0	10.0	7.0	5.0	8.0	8.0	15.0	18.0	21.0	24.0	23.0	20.0
24	15.0	6.0	9.0	5.0	7.0	6.0	14.0	18.0	21.0	24.0	21.0	21.0
25	15.0	7.0	8.0	6.0	7.0	6.0	14.0	18.0	23.0	24.0	20.0	19.0
26	15.0	13.0	7.0	6.0	7.0	8.0	13.0	18.0	23.0	24.0	21.0	---
27	15.0	9.0	6.0	5.0	6.0	8.0	15.0	18.0	24.0	24.0	20.0	20.0
28	14.0	9.0	4.0	4.0	6.0	8.0	15.0	18.0	23.0	23.0	20.0	20.0
29	14.0	7.0	3.0	4.0	---	8.0	15.0	18.0	23.0	25.0	20.0	19.0
30	15.0	9.0	0	4.0	---	8.0	8.0	17.0	21.0	24.0	20.0	20.0
31	15.0	---	2.0	4.0	---	---	---	18.0	---	24.0	20.0	---
MONTH	15.5	11.0	7.0	4.5	5.5	7.0	11.5	16.5	20.5	23.5	22.5	21.0

02066000 ROANOKE (STAUNTON) RIVER AT RANDOLPH, VA.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	MEAN DISCHARGE (CFS)	OCTOBER MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	NOVEMBER MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	DECEMBER MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1110	9	27	10100	625	17000	1200	22	71
2	1130	10	31	6910	300	5600	1490	23	93
3	1210	7	23	6430	160	2780	1470	23	91
4	877	5	12	5190	125	1750	1530	28	116
5	286	4	3.1	6750	180	3280	1580	35	149
6	396	5	5.3	8080	225	4910	965	30	78
7	1120	10	30	3350	79	715	560	20	30
8	1140	10	31	1470	40	159	1010	21	57
9	1250	13	44	1160	30	94	1340	27	98
10	1180	12	38	1520	42	172	1370	33	122
11	812	6	13	2240	48	290	1460	30	118
12	309	4	3.3	4300	60	697	1980	28	150
13	519	5	7.0	3840	55	570	1330	25	90
14	1910	10	52	3030	50	409	638	20	34
15	1960	10	53	3180	52	446	1110	22	66
16	1620	8	35	3180	60	515	1360	26	95
17	1840	15	75	5290	100	1430	1790	30	145
18	1180	12	38	4380	90	1060	2630	33	234
19	320	5	4.3	1550	50	209	1660	25	112
20	291	5	3.9	1150	27	84	912	20	49
21	698	8	15	1410	18	69	820	25	55
22	1750	18	85	1490	19	76	5000	190	2570
23	2220	20	120	1010	12	33	3130	160	1350
24	1810	16	78	5310	50	717	4220	175	1990
25	908	12	29	5260	47	667	1980	40	214
26	390	8	8.4	1970	40	213	1110	28	84
27	669	9	16	1150	38	118	939	25	63
28	1210	11	36	846	20	46	844	23	52
29	1260	11	37	1300	21	74	1230	30	100
30	2840	20	153	708	19	36	1880	35	178
31	4290	450	5210	--	--	--	2740	40	296
TOTAL	38505	--	6316.3	103554	--	44219	51278	--	8950

DAY	MEAN DISCHARGE (CFS)	JANUARY MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	FEBRUARY MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MARCH MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1520	35	144	972	50	131	1650	40	178
2	782	25	53	4020	70	760	2040	45	248
3	792	15	32	5250	75	1060	3330	90	809
4	858	9	21	2950	40	319	10400	210	5900
5	2040	35	193	1730	35	163	11400	173	5320
6	7170	130	2520	1150	31	96	6880	100	1860
7	7680	200	4150	1930	44	229	2550	50	344
8	7700	210	4370	6860	130	2410	1840	40	199
9	7090	131	2510	9280	145	3630	4340	45	527
10	2100	80	454	6390	95	1640	3020	50	408
11	1330	43	154	4330	90	1050	5290	60	857
12	1820	48	236	3970	80	858	2080	48	270
13	2130	50	288	4290	135	1560	1290	32	111
14	2140	50	289	11100	265	7940	1220	32	105
15	3360	58	526	7540	220	4480	1190	30	96
16	1790	33	159	7390	200	3990	5080	42	576
17	1320	30	107	4200	80	907	2430	30	197
18	965	28	73	4770	215	2770	5940	58	930
19	1490	30	121	2920	200	1580	2180	70	412
20	2370	35	224	2100	195	1110	5870	264	4180
21	2740	40	296	1540	50	208	3650	110	1080
22	4140	85	950	1420	67	257	1430	90	347
23	4840	112	1460	8570	400	9260	5150	115	1600
24	1710	60	277	13000	540	19000	4150	90	1010
25	1040	50	140	9190	260	6450	3070	40	332
26	1360	40	147	7780	103	2160	1770	8	38
27	6560	90	1590	6530	70	1230	1290	5	17
28	5900	110	2940	2560	50	346	1290	5	17
29	6870	95	2280	--	--	--	1510	8	33
30	5490	80	1190	--	--	--	2200	10	59
31	1450	40	157	--	--	--	2090	9	51
TOTAL	104547	--	28051	143732	--	75594	107620	--	28111

02066000 ROANOKE (STAUNTON) RIVER AT RANDOLPH, VA.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2060	8	44	1970	16	85	20300	740	40600
2	3250	16	140	1470	14	56	9580	400	10300
3	2210	15	90	1410	13	49	6500	250	4390
4	1230	14	46	1880	20	102	8720	100	2350
5	1090	14	41	1960	21	111	9370	300	7590
6	1980	20	107	1960	21	111	3340	156	1410
7	4700	30	381	3000	35	284	1590	50	215
8	6090	55	904	3100	48	402	3670	48	476
9	7600	64	1310	3070	45	373	2780	30	225
10	3530	30	286	2460	40	266	1580	15	64
11	1920	25	130	2500	45	304	3230	20	174
12	1620	20	87	2320	40	251	4200	22	249
13	2180	22	129	8600	550	12800	1630	20	88
14	2200	25	149	20800	1200	67400	1040	15	42
15	2120	18	103	12700	510	17500	1490	20	80
16	1950	15	79	15100	690	28100	2150	70	406
17	1580	11	47	24400	1000	65900	5010	150	2030
18	1510	10	41	17700	400	19100	6050	312	5100
19	1390	12	45	7190	360	6990	4320	100	1170
20	3390	19	174	6460	300	5230	1660	55	247
21	2000	18	97	3320	140	1250	1610	50	217
22	1560	17	72	3160	130	1110	1990	58	312
23	1470	15	60	2830	90	688	1380	30	112
24	1450	14	55	2590	80	559	1400	30	113
25	1480	15	60	2940	75	595	4340	40	469
26	1440	14	54	2280	40	246	3500	35	331
27	3310	20	179	2050	30	166	1730	30	140
28	1590	15	64	2030	30	164	904	15	37
29	1510	15	61	3580	44	425	3560	60	577
30	1480	14	56	12600	480	16300	3970	120	1290
31	--	--	--	23500	960	60900	--	--	--
TOTAL	70890	--	5091	200930	--	307817	122594	--	80804

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	4550	200	2460	1380	100	373	1710	45	208
2	3940	150	1600	1100	70	208	1670	42	189
3	2780	130	976	2290	75	464	1650	40	178
4	2130	90	518	1990	60	322	1570	33	140
5	1220	60	198	1850	75	375	1210	28	91
6	910	35	86	2950	207	1650	678	18	33
7	2570	45	312	1670	199	897	633	15	26
8	2580	55	383	1050	90	255	942	20	51
9	3220	110	956	866	50	120	1550	25	105
10	3930	173	1840	2390	55	355	2310	40	249
11	2170	80	469	3690	75	747	3600	300	2920
12	1310	40	141	1760	50	238	8230	550	12200
13	1660	45	202	1230	30	100	7170	360	6970
14	2760	60	447	2370	36	230	3890	200	2100
15	1960	60	318	1590	30	129	2300	100	621
16	1840	65	323	638	22	38	1960	55	291
17	3140	69	585	561	20	30	2170	65	381
18	1490	40	161	1280	35	121	3530	78	743
19	740	20	40	3360	50	454	1570	60	254
20	1230	25	83	2860	28	216	904	50	122
21	1580	35	149	2320	25	157	4870	72	947
22	1490	30	121	1310	21	74	2320	60	376
23	1480	40	160	808	19	41	2100	57	323
24	1490	41	165	1150	22	68	1910	55	284
25	1120	150	454	1580	35	149	1940	55	288
26	715	90	174	1550	30	126	1250	40	135
27	1100	100	297	3440	87	808	733	33	65
28	1540	115	478	6740	178	3240	1100	40	119
29	1490	115	463	3020	70	571	1520	50	205
30	1820	130	639	1540	35	146	1540	50	208
31	2180	140	824	1320	33	118	--	--	--
TOTAL	62135	--	16022	61673	--	12820	68530	--	30822

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)	1135988
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)	644617.3

02075500 DAN RIVER AT PACES, VA.

LOCATION.--Lat 36°38'32", long 79°05'23", Halifax County, at gaging station on right bank 100 ft upstream from bridge on State Highway 658, 0.5 mile southeast of Paces, 0.5 mile upstream from Big Toby Creek, 2.7 miles upstream from Birch Creek, and at mile 36.0.

DRAINAGE AREA.--2,550 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1955 to August 1956.
Water temperatures: January 1954 to September 1956.
Sediment records: January 1954 to September 1971.

REMARKS.--Sediment samples collected once weekly.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	840	31	70	14900	700	28200	1330	19	68
2	764	30	62	16300	925	40700	1710	24	111
3	730	29	57	4690	290	3670	1740	25	117
4	732	29	57	3760	175	1780	1690	23	105
5	701	28	53	3480	70	658	1640	22	97
6	459	27	33	3110	60	504	1610	22	96
7	558	30	48	2730	56	413	1130	15	46
8	682	38	70	2460	45	299	1100	15	45
9	675	37	67	1690	30	137	1320	16	57
10	619	40	67	1620	28	122	1460	18	71
11	689	43	80	2680	38	275	1430	18	69
12	699	45	85	3670	50	495	1520	19	78
13	512	40	55	3640	50	491	1470	20	79
14	624	42	71	3360	55	499	1210	15	49
15	775	60	126	4340	161	1890	1150	12	37
16	1020	80	220	4070	100	1100	1200	10	32
17	1240	95	318	2970	80	642	1870	21	106
18	1040	44	124	2860	65	502	2440	30	198
19	772	40	83	2610	60	423	2040	25	138
20	652	30	53	2240	40	242	1720	20	93
21	785	35	74	2400	39	253	1610	22	96
22	1160	48	150	2370	37	237	3010	50	406
23	1620	57	249	1740	30	141	4040	75	818
24	1320	43	153	1550	27	113	3290	60	533
25	1070	38	110	2110	32	182	2890	46	359
26	892	30	72	2050	30	166	2590	32	224
27	745	25	50	2050	30	166	1910	19	98
28	792	27	58	1370	20	74	1770	15	72
29	853	29	67	2060	28	156	1590	15	64
30	985	138	367	1300	18	63	1520	12	49
31	5500	475	7050	--	--	--	1730	16	75
TOTAL	30545	--	10199	106180	--	84593	56730	--	4486

02075500 DAN RIVER AT PACES, VA.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1870	20	101	1930	14	73	3000	50	405
2	1870	20	101	1480	12	48	2870	40	310
3	1580	15	64	1360	11	40	5530	170	2540
4	1580	15	64	1670	13	59	13400	390	14100
5	4310	210	2440	2130	18	104	12600	290	9870
6	12600	440	15000	3340	80	721	6050	125	2040
7	7280	240	4720	5800	190	2980	4400	50	594
8	4150	85	952	12700	450	15400	3430	45	417
9	3300	60	535	17000	600	27500	3070	40	332
10	2950	55	438	11500	200	6210	3260	45	396
11	2450	49	324	5110	100	1380	3170	40	342
12	2150	44	255	3620	60	586	3050	45	371
13	2480	45	301	3900	65	684	2900	50	392
14	2440	44	290	7500	85	1720	2820	55	419
15	2380	38	244	6820	70	1290	2260	51	311
16	2310	36	225	4310	60	698	2300	42	261
17	2240	30	181	3890	50	525	2900	45	352
18	1660	25	112	3450	47	438	2740	40	296
19	1630	23	101	3210	45	390	2590	35	245
20	1890	28	143	3040	39	320	2770	37	277
21	1780	27	130	2930	28	222	3070	29	240
22	1820	29	143	2360	25	159	2380	27	174
23	2060	30	167	5980	153	2470	2130	26	150
24	2220	34	204	14800	400	16000	2130	28	161
25	1990	25	134	7240	250	4890	2020	30	164
26	2190	27	160	4610	125	1560	2080	31	174
27	2200	29	172	4060	98	1070	2130	32	184
28	1860	24	121	3850	60	624	2460	35	232
29	1590	15	64	--	--	--	2780	43	323
30	1630	16	70	--	--	--	2970	46	369
31	1970	20	106	--	--	--	2840	31	238
TOTAL	84430	--	28062	149590	--	88161	112100	--	36679

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2480	25	167	2070	40	224	4330	240	2810
2	2340	21	133	1860	38	191	3740	230	2320
3	2490	25	168	1790	35	169	3330	125	1120
4	2670	32	231	1680	30	136	3040	110	903
5	2340	30	190	1950	32	168	2870	105	814
6	2930	141	1120	2010	34	185	2810	100	759
7	7370	260	5170	2030	34	186	2100	50	284
8	8370	310	7010	2130	35	201	2030	40	219
9	5160	100	1390	2310	38	237	2230	48	289
10	3850	60	624	1960	30	159	2630	55	391
11	3230	45	392	1640	20	89	2430	50	328
12	2600	40	281	1650	60	267	2070	30	168
13	2480	35	234	7500	600	12200	2250	75	456
14	2720	39	286	18200	1300	63900	2170	60	352
15	2620	36	255	13800	900	33500	2010	50	271
16	2550	37	255	13000	792	27800	1960	40	212
17	2440	35	231	19400	1000	52400	2690	45	327
18	2460	35	232	14400	366	14200	2510	41	278
19	1980	19	102	5370	120	1740	2150	35	203
20	1790	17	82	4070	90	989	2080	30	168
21	2030	20	110	3660	88	870	2200	45	267
22	2110	22	125	3360	75	680	1600	32	138
23	2260	25	153	3080	60	499	2070	55	307
24	2240	25	151	2300	48	298	2290	90	556
25	2250	25	152	2140	39	225	2330	125	786
26	1940	20	105	2650	45	322	1900	110	564
27	1650	16	71	2670	45	324	1900	110	564
28	1850	18	90	2770	50	374	1580	105	448
29	2310	25	156	5660	450	6880	1350	106	386
30	2630	45	320	10600	825	23600	1820	115	565
31	--	--	--	6980	304	5730	--	--	--
TOTAL	86140	--	19986	164690	--	248743	70470	--	17253

02075500 DAN RIVER AT PACES, VA.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

		JULY			AUGUST			SEPTEMBER	
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2460	90	598	2810	198	1500	1080	25	73
2	2290	60	371	1860	188	944	1080	25	73
3	1920	55	285	1890	200	1020	1080	25	73
4	1870	50	252	2470	210	1400	1040	24	67
5	1680	40	181	2050	100	554	1130	34	104
6	1460	38	150	2090	90	508	942	32	81
7	1250	66	223	1700	60	275	869	30	70
8	1570	90	382	1520	55	226	833	25	56
9	1880	158	802	1240	147	492	859	27	63
10	2150	287	1670	1050	100	284	1020	30	83
11	3110	338	2840	1280	110	380	995	28	75
12	2290	225	1390	1600	123	531	3790	38	389
13	1670	200	902	2620	130	920	3950	33	352
14	1650	200	891	2100	90	510	2610	30	211
15	1470	165	655	1540	65	270	1840	25	124
16	1340	160	579	1200	80	259	1400	22	83
17	1210	150	490	1090	96	283	1180	20	64
18	1300	212	744	1210	100	327	1250	23	78
19	1070	170	491	1690	115	525	1460	25	99
20	987	140	373	1660	100	448	1430	28	108
21	1350	190	693	1340	60	217	1370	27	100
22	1290	200	697	1280	55	190	1590	35	150
23	1140	198	609	2000	37	200	2100	38	215
24	1030	60	167	2080	40	225	2060	35	195
25	1130	47	143	1770	20	96	1560	33	139
26	1250	70	236	1290	15	52	1500	32	130
27	1060	65	186	2400	30	194	1220	25	82
28	1270	80	274	2700	25	182	1100	20	59
29	1370	85	314	2470	38	253	1080	18	52
30	3090	180	1500	1370	20	74	1150	22	68
31	3660	260	2570	957	18	47	--	--	—
TOTAL	52267	--	21658	54327	—	13386	44568	--	3516

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)	1012037
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)	576722

KANAWHA RIVER BASIN

03164000 NEW RIVER NEAR GALAX, VA.

LOCATION.--Lat 36°38'50", long 80°58'45", Grayson County, at gaging station on left bank at upstream side of bridge on U.S. Highway 58, 500 ft downstream from Meadow Creek, 1.2 miles southwest of Old Town, 3.1 miles southwest of Galax, and 3.6 miles downstream from Elk Creek.

DRAINAGE AREA.--1,131 sq mi.

PERIOD OF RECORD.--Chemical analyses: April 1930 to March 1931, October to December 1949, October 1951 to September 1952, February 1967 to September 1971.
Water temperatures: October to December 1949, April 1968 to September 1971.

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	51	45	43	---	43	43	49	52	50	49	50
2	53	51	45	43	46	43	42	49	53	49	50	49
3	48	52	45	45	47	44	42	52	52	49	50	49
4	52	50	45	45	46	43	43	50	53	50	51	57
5	54	49	45	46	48	44	42	43	51	50	52	58
6	56	50	45	45	46	44	42	43	50	49	49	58
7	---	50	45	46	47	45	43	44	51	---	50	57
8	52	49	45	---	47	44	43	44	52	---	49	58
9	56	48	47	44	46	44	44	44	50	---	50	57
10	54	48	48	45	47	41	43	45	51	---	52	58
11	53	48	48	49	47	41	51	44	51	---	54	59
12	53	48	48	48	46	40	50	43	52	---	53	59
13	53	48	48	52	47	41	49	43	48	---	54	60
14	52	48	47	56	43	40	48	43	49	---	53	58
15	55	48	41	56	43	41	49	45	50	---	53	58
16	55	51	38	54	43	40	48	43	49	---	54	54
17	55	48	40	53	43	40	49	43	48	---	54	53
18	55	50	38	58	42	41	52	44	49	---	53	54
19	55	56	37	52	42	42	49	43	49	---	53	53
20	55	---	39	55	43	41	49	50	49	56	54	54
21	60	46	37	46	42	41	51	49	49	55	53	54
22	59	46	40	48	42	43	49	50	50	53	53	55
23	59	48	38	46	43	43	48	50	49	51	49	54
24	61	47	40	46	43	42	49	50	49	54	48	54
25	58	45	40	47	44	42	48	49	50	52	49	56
26	60	46	41	49	44	44	49	50	49	53	48	55
27	60	51	43	46	43	43	50	49	50	51	50	54
28	61	45	43	47	44	42	48	48	51	51	49	56
29	59	45	43	46	---	43	49	50	52	52	48	57
30	58	45	42	46	---	43	52	48	50	53	49	58
31	59	---	42	---	---	42	---	49	---	52	50	---
MONTH	56	49	43	48	45	42	47	47	50	---	51	56

03164000 NEW RIVER NEAR GALAX, VA.--Continued

EXTREMES.--1970-71:
Specific conductance: Maximum daily, 61 micromhos Oct. 24, 28; minimum daily, 37 micromhos Dec. 19, 21.
Water temperatures: Maximum, 25.0°C on several days in August to September; minimum, 1.0°C on several days during January to February.

Period of record:
Specific conductance (1968-71): Maximum daily, 73 micromhos Aug. 8, 1968; minimum daily, 30 micromhos Feb. 11, 1969.
Water temperatures (1968-71): Maximum, 31.0°C July 17, 18, 1969; minimum, freezing point on many days during winter period.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	16.0	2.0	3.0	1.0	3.0	7.0	11.0	17.0	20.0	24.0	24.0
2	21.0	16.0	2.0	3.0	1.0	3.0	8.0	11.0	17.0	20.0	25.0	25.0
3	20.0	15.0	4.0	2.0	1.0	3.0	8.0	11.0	18.0	21.0	25.0	25.0
4	20.0	15.0	6.0	2.0	1.0	3.0	8.0	11.0	18.0	21.0	24.0	23.0
5	19.0	15.0	4.0	2.0	2.0	3.0	9.0	12.0	18.0	21.0	25.0	23.0
6	19.0	14.0	4.0	2.0	2.0	3.0	9.0	12.0	18.0	21.0	24.0	23.0
7	---	14.0	4.0	2.0	2.0	3.0	9.0	12.0	18.0	---	25.0	23.0
8	20.0	15.0	5.0	---	2.0	3.0	9.0	12.0	18.0	---	25.0	23.0
9	20.0	15.0	4.0	2.0	2.0	3.0	9.0	12.0	18.0	---	25.0	22.0
10	20.0	15.0	4.0	2.0	3.0	4.0	9.0	12.0	18.0	---	25.0	22.0
11	20.0	15.0	4.0	2.0	3.0	4.0	8.0	12.0	18.0	---	22.0	22.0
12	20.0	15.0	3.0	2.0	3.0	4.0	8.0	13.0	19.0	---	22.0	22.0
13	20.0	14.0	3.0	2.0	3.0	4.0	8.0	13.0	19.0	---	22.0	22.0
14	20.0	14.0	3.0	3.0	4.0	4.0	9.0	13.0	19.0	---	22.0	22.0
15	19.0	11.0	4.0	3.0	4.0	5.0	9.0	13.0	19.0	---	21.0	22.0
16	18.0	10.0	4.0	3.0	4.0	5.0	9.0	13.0	20.0	---	21.0	22.0
17	18.0	10.0	4.0	3.0	4.0	5.0	8.0	13.0	20.0	---	22.0	22.0
18	18.0	8.0	4.0	3.0	5.0	5.0	9.0	13.0	20.0	---	21.0	21.0
19	18.0	8.0	4.0	2.0	5.0	5.0	10.0	13.0	20.0	---	21.0	21.0
20	18.0	---	3.0	2.0	5.0	5.0	10.0	15.0	20.0	22.0	22.0	21.0
21	17.0	6.0	3.0	2.0	5.0	6.0	10.0	16.0	20.0	22.0	21.0	21.0
22	17.0	5.0	3.0	2.0	5.0	6.0	10.0	16.0	20.0	22.0	21.0	22.0
23	17.0	3.0	3.0	2.0	5.0	7.0	10.0	16.0	20.0	22.0	24.0	22.0
24	17.0	3.0	3.0	2.0	5.0	7.0	10.0	17.0	20.0	22.0	24.0	21.0
25	17.0	3.0	3.0	2.0	5.0	7.0	10.0	17.0	21.0	23.0	25.0	21.0
26	17.0	2.0	3.0	---	3.0	7.0	10.0	17.0	21.0	23.0	24.0	22.0
27	17.0	2.0	3.0	1.0	3.0	7.0	11.0	17.0	21.0	23.0	24.0	22.0
28	17.0	2.0	3.0	1.0	3.0	7.0	11.0	18.0	21.0	23.0	24.0	22.0
29	17.0	2.0	3.0	1.0	---	7.0	11.0	18.0	21.0	23.0	24.0	22.0
30	17.0	2.0	3.0	1.0	---	7.0	11.0	18.0	20.0	23.0	24.0	22.0
31	17.0	---	3.0	1.0	---	7.0	---	18.0	---	23.0	24.0	---
MONTH	18.5	10.0	3.5	2.0	3.5	5.0	9.0	14.0	19.0	---	23.5	22.0

03176500 NEW RIVER AT GLEN LYN, VA.

LOCATION.--Lat 37°22'30", long 80°51'45", Giles County, on left bank at the steam electric plant of the Appalachian Electric Power Company, at Glen Lyn, 0.3 miles upstream from East River, and 6.3 miles downstream from Wolf Creek.

DRAINAGE AREA.--3,768 sq mi.

PERIOD OF RECORD.--Chemical analyses: April 1930 to March 1931, October 1949 to September 1950, October 1951 to September 1956, February 1967 to September 1971.
Water temperatures: October 1964 to September 1971.

EXTREMES.--1970-71:
Specific conductance: Maximum daily, 250 micromhos Oct. 14; minimum daily, 102 micromhos May 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DIS-CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO-RIDE (CL) (MG/L)
OCT.										
03...	1770	5.7	0	24	8.4	5.1	1.7	69	33	4.6
10...	1700	4.4	10	27	5.5	6.7	1.7	70	32	5.2
17...	1940	5.1	10	18	5.1	4.6	1.6	60	19	3.6
24...	3500	5.4	0	21	5.6	4.4	1.4	64	23	3.9
31...	11400	5.5	0	14	5.1	3.7	1.5	57	11	4.0
NOV.										
07...	4300	7.5	0	16	5.8	3.1	1.3	60	11	3.7
14...	5130	7.2	0	15	4.3	3.0	1.5	55	12	3.9
21...	3330	6.8	0	16	5.1	3.9	1.6	59	16	3.9
28...	2570	5.2	10	15	6.1	4.2	1.2	62	17	3.9
DEC.										
04...	2650	5.2	0	21	6.1	4.1	1.0	58	28	4.4
11...	2030	4.2	20	22	7.2	4.1	2.4	62	28	4.0
18...	2430	5.0	30	19	6.6	3.9	2.4	54	24	5.6
25...	5480	6.4	10	13	4.2	2.9	1.8	49	9.8	4.1
JAN.										
01...	3130	6.0	0	17	6.1	3.3	1.6	58	17	4.2
08...	5770	6.2	0	12	4.6	3.3	1.6	48	8.6	3.9
15...	3340	5.5	0	17	5.1	3.4	1.4	57	18	3.7
22...	3340	6.2	0	18	5.1	3.0	1.2	53	19	3.9
29...	6630	6.0	20	13	4.3	3.3	1.5	47	10	4.6
FEB.										
05...	5000	5.3	10	15	4.6	2.4	1.0	50	15	4.2
12...	6010	7.2	40	16	4.7	2.6	1.3	52	15	3.8
19...	8390	6.7	150	15	4.5	2.6	1.9	51	15	4.1
26...	8910	6.8	230	13	4.2	2.3	1.5	47	10	3.3
MAR.										
05...	9320	7.3	0	13	4.7	2.3	1.2	48	10	3.5
12...	5270	6.6	170	13	5.1	2.2	1.2	54	8.8	4.1
26...	4090	5.6	0	13	5.1	2.0	1.0	55	11	2.8
APR.										
08...	10500	6.5	0	12	4.2	2.6	1.1	47	9.8	4.8
15...	4450	5.0	0	15	5.0	2.4	1.1	58	11	3.8
22...	3200	4.6	50	19	6.0	2.5	1.0	68	15	4.6
29...	5580	5.1	80	15	4.6	1.9	1.0	54	9.8	2.8
MAY										
06...	3510	5.8	0	14	5.0	2.5	1.0	57	12	3.6
13...	11800	6.0	60	17	5.0	1.8	1.0	63	12	3.2
20...	7910	6.4	20	15	4.9	1.9	1.1	57	11	2.4
27...	5020	6.5	0	15	5.2	2.6	1.2	61	12	3.6
JUNE										
03...	7900	6.8	20	15	5.0	2.0	1.5	59	11	3.1
10...	4310	6.8	40	20	5.8	4.5	1.2	69	13	8.2
17...	7600	6.6	40	16	5.0	3.2	1.4	61	11	3.0
24...	9000	7.9	50	18	5.3	4.4	1.8	66	11	5.9
JULY										
01...	5050	7.0	0	16	5.9	2.7	1.2	63	17	2.4
08...	3690	7.2	40	16	7.2	2.7	1.2	68	17	2.7
15...	3640	7.1	0	16	5.7	3.0	1.5	58	13	3.4
22...	3270	5.2	0	22	8.4	3.5	1.6	75	25	3.4
29...	2670	4.4	0	17	6.7	3.5	1.6	69	16	4.2
AUG.										
05...	4210	7.5	0	22	7.0	2.7	1.4	67	24	2.8
12...	3750	7.4	0	14	5.8	2.7	1.4	61	12	2.6
19...	2500	6.7	10	20	7.3	2.5	1.6	70	21	4.5
26...	2810	6.3	0	21	6.2	2.9	1.6	65	21	3.5
SEP.										
02...	2040	5.7	20	21	7.5	4.7	2.1	68	25	4.7
09...	1950	5.6	0	19	8.1	4.1	1.6	75	18	3.0
16...	3600	6.7	0	16	5.7	4.1	1.8	62	14	3.2
23...	6770	7.3	20	12	5.2	3.6	1.8	54	13	3.2
30...	2560	6.2	20	18	7.4	3.8	1.8	66	22	4.6

03176500 NEW RIVER AT GLEN LYN, VA.--Continued

EXTREMES.--1970-71--Continued
Water temperatures: Maximum, 27.0°C Sept. 29; minimum, freezing point Feb. 1.

Period of record:
Specific conductance (1968-71): Maximum daily, 350 micromhos Nov. 6, 1968; minimum daily, 93 micromhos Jan. 1, Apr. 4, 1970.
Water temperatures: Maximum, 28.5°C Aug. 16, 1965; minimum, freezing point on many days during winter period.

REMARKS.--Analyses of major chemical constituents determined from samples which are collected at seven-day intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPECI-FIC COND-UCTANC (MICRO-MHOS)	PH (UNITS)	COLOR (PLAT-INUM-COBALT UNITS)
OCT.									
03...	.1	6.9	.10	126	96	39	230	7.3	5
10...	.2	6.4	.17	136	90	32	215	7.5	5
17...	.1	3.5	.12	96	65	16	160	7.5	5
24...	.1	6.1	.06	106	76	24	175	7.4	10
31...	.1	1.6	.06	74	55	8	126	7.5	8
NOV.									
07...	.1	2.8	.02	81	64	15	139	7.3	5
14...	.1	3.0	.00	84	55	10	136	7.3	10
21...	.1	4.3	.03	91	61	14	160	7.5	10
28...	.1	3.4	.07	87	62	0	146	7.0	5
DEC.									
04...	.1	7.5	.04	115	78	30	183	7.2	5
11...	.2	7.0	.09	116	84	34	190	7.4	5
18...	.1	5.9	.04	107	74	30	170	7.2	5
25...	.1	3.0	.02	77	50	10	117	7.0	5
JAN.									
01...	.1	5.3	.07	93	68	20	147	7.3	5
08...	.1	3.5	.05	70	49	10	119	7.3	5
15...	.1	5.5	.05	89	64	17	145	7.1	5
22...	.1	6.3	.05	91	66	22	149	7.2	5
29...	.1	3.8	.03	77	50	12	122	7.3	5
FEB.									
05...	.1	4.9	.04	82	56	16	140	7.0	5
12...	.1	4.9	.01	84	60	17	148	7.2	5
19...	.1	5.3	.09	96	56	14	136	7.6	25
26...	.1	5.0	.07	72	50	12	118	7.2	25
MAR.									
05...	.1	4.4	.04	71	52	12	120	7.2	5
12...	.1	2.7	.06	76	54	9	126	7.6	10
26...	.1	4.0	.02	82	54	14	134	7.2	5
APR.									
08...	.1	3.1	.00	71	42	4	116	7.0	0
15...	.1	4.0	.06	82	58	10	134	7.4	5
22...	.1	4.8	.03	94	72	16	170	7.3	5
29...	.1	2.8	.04	74	56	12	128	7.2	5
MAY									
06...	.1	2.5	.13	79	56	9	137	7.0	5
13...	.1	2.6	.04	82	63	11	149	7.4	5
20...	.1	2.8	.00	80	58	11	132	7.2	10
27...	.1	3.6	.03	87	59	9	140	7.2	5
JUNE									
03...	.1	2.5	.02	84	58	10	132	7.3	5
10...	.1	2.5	.00	105	74	18	165	7.7	10
17...	.1	4.8	.11	98	60	10	148	7.6	5
24...	.1	5.3	.12	118	67	13	165	7.7	10
JULY									
01...	.1	4.2	.05	92	64	13	140	7.5	10
08...	.1	3.4	.07	90	70	14	148	7.8	5
15...	.1	3.0	.07	83	64	16	142	7.5	5
22...	.1	4.9	.13	116	90	28	189	7.2	5
29...	.1	3.3	.05	96	70	14	165	7.1	3
AUG.									
05...	.1	6.2	.02	112	84	29	175	7.4	5
12...	.1	2.5	.02	80	59	9	138	7.1	5
19...	.1	4.2	.13	114	80	22	180	7.3	3
26...	.1	6.8	.06	115	78	24	180	7.2	3
SEP.									
02...	.1	4.5	.04	111	84	28	190	7.2	3
09...	.1	2.7	.10	105	80	19	175	7.3	7
16...	.1	3.4	.06	88	64	12	142	7.1	3
23...	.1	3.2	.03	79	52	7	136	7.5	7
30...	.1	5.4	.10	109	76	22	185	7.6	7

03176500 NEW RIVER AT GLEN LYN, VA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	240	130	172	147	137	140	130	126	110	140	132	225
2	225	119	195	158	129	134	124	127	124	138	130	190
3	230	138	183	165	122	124	119	140	132	139	157	175
4	220	138	183	148	124	130	129	142	138	170	142	195
5	220	143	159	150	140	120	144	134	136	172	175	180
6	230	144	166	126	122	122	176	137	142	205	142	165
7	219	139	153	120	114	120	133	120	170	198	130	175
8	235	150	180	119	112	122	116	102	175	148	138	195
9	220	156	197	118	116	138	115	114	138	155	168	175
10	215	165	165	125	111	128	114	118	165	142	142	150
11	185	155	190	133	118	142	106	122	140	163	130	170
12	220	130	179	170	148	126	110	148	128	160	138	160
13	231	138	175	142	130	118	122	149	139	195	140	138
14	250	136	160	148	112	118	130	120	155	163	155	144
15	190	136	159	145	120	119	134	124	180	142	150	150
16	195	146	184	138	111	156	139	126	146	144	136	142
17	160	169	182	146	120	122	140	128	148	150	165	160
18	172	146	170	132	122	124	158	132	144	185	200	153
19	185	160	136	143	136	130	159	134	136	170	180	180
20	210	180	140	150	128	124	195	132	148	177	190	200
21	214	160	169	164	114	122	185	140	185	195	200	134
22	236	183	170	149	116	142	170	122	175	189	178	130
23	227	174	113	134	112	157	175	130	144	195	167	136
24	175	170	110	132	112	130	169	146	165	165	197	130
25	170	130	117	137	116	122	163	156	144	140	220	136
26	168	136	115	116	118	134	160	150	134	[illegible]	180	150
27	195	190	112	110	110	138	171	140	142	210	181	155
28	200	146	124	114	128	146	159	144	160	[illegible]	165	165
29	199	145	136	122	---	138	128	136	190	145	180	185
30	219	144	138	118	---	165	126	126	132	[illegible]	170	185
31	126	---	174	130	---	130	---	104	---	138	200	---
MONTH	206	150	158	137	121	132	143	131	149	167	164	164

03176500 NEW RIVER AT GLEN LYN, VA.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.5	17.0	11.5	2.5	0	7.5	10.0	14.0	11.0	25.0	24.0	25.0
2	17.0	16.0	14.0	2.0	1.0	7.5	10.0	13.0	17.5	24.0	23.0	24.0
3	18.5	15.5	11.0	3.0	1.5	6.0	8.0	11.5	17.0	25.0	25.0	24.0
4	17.5	13.0	10.0	4.5	1.0	3.5	8.5	11.0	19.0	23.0	24.0	23.0
5	17.5	12.0	8.5	6.5	2.5	3.0	11.0	13.0	20.0	24.0	24.5	23.5
6	17.5	12.0	6.0	5.0	3.5	4.5	12.0	13.5	21.0	25.0	22.5	25.0
7	17.0	12.5	4.0	4.5	3.5	6.0	8.0	12.5	22.0	25.0	22.5	25.0
8	19.0	12.5	3.5	3.5	3.5	5.0	8.5	12.5	23.0	24.0	23.0	25.0
9	19.5	14.0	5.0	3.5	2.0	3.0	10.5	13.5	22.0	24.5	23.0	25.0
10	20.0	14.0	6.5	4.0	1.5	5.0	11.0	13.5	20.5	25.0	25.0	26.0
11	20.0	13.5	7.5	5.0	2.0	6.0	---	15.0	21.0	25.5	25.0	25.0
12	21.0	13.0	9.0	6.0	4.0	7.0	10.5	15.0	21.0	25.0	25.0	24.0
13	21.0	13.5	9.0	7.0	6.0	8.5	14.0	15.5	20.5	25.0	25.0	21.5
14	21.5	13.0	7.0	7.0	2.0	9.0	13.5	14.0	22.0	25.5	25.0	20.0
15	21.5	13.5	6.0	7.0	2.5	10.5	11.5	14.5	23.0	24.0	24.0	20.0
16	19.5	9.0	5.5	4.5	3.0	11.0	11.5	14.0	22.0	24.0	24.0	22.0
17	15.5	7.5	6.5	4.0	4.0	9.0	12.5	14.5	20.0	25.0	25.0	23.0
18	15.0	9.0	6.0	3.5	4.0	6.5	14.0	17.0	20.0	25.0	24.5	23.0
19	14.0	9.0	7.5	2.0	5.0	7.0	15.0	18.0	20.0	24.0	23.5	22.5
20	14.5	11.0	8.0	1.5	5.5	6.5	17.0	18.0	21.0	24.0	24.0	22.0
21	15.0	11.0	8.5	1.0	7.0	5.0	16.0	17.5	22.0	24.0	24.5	23.0
22	16.0	9.5	8.0	2.0	7.0	6.0	13.5	16.0	23.0	23.0	25.0	22.0
23	16.5	9.5	8.5	4.5	6.5	7.5	12.0	16.0	21.0	24.0	24.0	22.0
24	18.0	5.0	8.0	4.5	5.0	5.5	12.0	17.0	20.5	24.0	24.0	22.0
25	19.0	4.0	6.0	4.0	4.5	6.5	12.0	18.5	21.5	23.5	24.0	22.0
26	17.5	4.5	4.0	6.0	5.0	6.0	13.0	19.0	21.5	24.0	24.0	20.0
27	18.0	6.5	3.0	2.0	5.5	5.5	14.0	19.0	23.0	24.0	25.0	20.0
28	17.0	8.0	2.5	1.5	7.5	8.5	15.0	17.0	23.0	25.0	25.0	22.0
29	17.0	9.5	2.0	1.0	---	11.0	14.0	15.5	26.0	25.0	24.0	27.0
30	15.0	10.5	2.0	4.0	---	10.0	13.0	14.0	24.0	24.0	23.0	23.0
31	17.0	---	3.0	3.5	---	9.0	---	14.0	---	25.0	24.0	---
MONTH	18.0	11.0	6.5	4.0	4.0	7.0	12.0	15.0	21.0	24.5	24.0	23.0

03207800 LEVISA FORK AT BIG ROCK, VA.

LOCATION.--Lat 37°21'13", long 82°11'45", Buchanan County, at gaging station on left bank at Big Rock, 2,000 ft downstream from Rocklick Creek, and 2,500 ft downstream from bridge on State Highway 645.

DRAINAGE AREA.--297 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1971.
Water temperatures: October 1969 to September 1971.
Sediment: January 1970 to September 1971.

EXTREMES, 1970-71:
Specific conductance: Maximum daily, 920 micromhos Oct. 18-20; minimum daily, 173 micromhos Apr. 28.
Water temperatures: Maximum, 30.0°C June 6, July 2, 18, Aug. 17; minimum, 1.0°C Nov. 24, Jan. 2, 18, 28.
Sediment concentrations: Maximum daily, 9,020 mg/l May 6; minimum daily, 1 mg/l Oct. 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DIS-CHARGE (CFS)	SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLO-RIDE (CL) (MG/L)
OCT.										
05...	29	2.8	0	60	22	42	4.7	79	210	34
12...	17	.8	10	75	23	59	5.6	90	260	45
19...	13	--	--	--	--	--	--	--	280	--
19...	13	.5	90	81	27	73	6.1	106	290	59
26...	21	1.4	30	71	27	53	5.4	94	240	44
NOV.										
02...	506	7.0	80	30	12	6.8	3.3	32	96	7.8
09...	146	6.8	30	38	16	16	3.1	34	140	14
16...	130	13	0	34	15	20	3.3	40	140	13
18...	100	--	--	--	--	--	--	--	160	--
23...	110	13	40	38	16	21	2.8	42	150	14
30...	65	6.1	0	44	18	36	2.6	48	180	22
DEC.										
04...	46	5.2	30	50	21	37	2.9	56	200	25
13...	102	4.9	0	48	20	29	5.7	52	180	23
17...	72	--	--	--	--	--	--	--	189	--
20...	60	4.6	30	42	20	37	4.0	48	180	24
27...	281	7.3	0	24	12	13	2.9	24	100	8.8
JAN.										
03...	124	6.7	0	33	16	25	3.4	32	150	18
10...	288	7.2	0	27	13	16	2.8	24	120	9.1
17...	386	7.5	30	22	11	14	2.7	21	97	7.8
20...	215	--	--	--	--	--	--	--	120	--
24...	311	7.0	0	27	13	15	2.9	29	100	9.9
31...	792	7.5	0	22	10	11	2.4	19	86	7.3
FEB.										
07...	1010	7.6	10	24	11	11	2.9	24	88	6.7
14...	1120	7.6	30	19	8.9	9.4	2.5	16	72	6.7
18...	545	--	--	--	--	--	--	--	93	--
21...	443	7.9	200	25	12	14	2.4	24	100	7.7
28...	233	7.7	20	32	17	20	3.4	34	150	10
MAR.										
07...	834	7.9	0	16	8.5	8.6	1.9	18	64	9.2
18...	273	--	--	--	--	--	--	--	120	--
28...	262	6.4	0	24	13	17	3.1	32	120	9.0
APR.										
04...	227	6.2	40	24	13	17	2.7	32	110	8.2
11...	542	7.6	0	20	11	11	2.6	24	87	7.1
18...	222	6.6	100	15	16	23	4.2	43	150	11
23...	658	--	--	--	--	--	--	--	74	--
29...	492	7.3	40	21	10	12	2.8	27	84	6.3
MAY										
02...	498	8.2	0	25	12	13	2.4	29	110	6.6
09...	2300	8.6	80	23	11	9.2	2.1	19	100	5.0
13...	2660	8.4	0	19	9.2	8.1	2.0	20	81	4.1
14...	1890	--	--	--	--	--	--	--	86	--
16...	800	8.0	20	27	14	13	2.9	28	120	4.4
23...	260	7.4	0	42	20	26	3.1	49	180	13
30...	223	6.3	0	45	21	25	3.4	52	180	11
JUNE										
06...	110	3.3	20	53	22	43	5.0	69	210	26
13...	495	4.4	70	53	15	32	4.1	63	170	18
20...	584	8.1	0	25	11	12	2.9	30	91	7.1
23...	840	--	--	--	--	--	--	--	79	--
27...	268	8.5	0	39	16	24	3.1	49	150	16
JULY										
11...	190	8.3	0	31	13	18	3.1	51	110	6.6
15...	110	--	--	--	--	--	--	--	180	--
18...	79	5.4	0	58	26	40	4.6	75	230	18
25...	110	7.4	20	36	16	18	3.3	49	130	12

03207800 LEVISA FORK AT BIG ROCK, VA.--Continued

EXTREMES.--1970-71--Continued
Sediment discharge: Maximum daily, 107,000 tons/day May 6; minimum daily, .04 ton/day Oct. 19.

Period of record:
Specific conductance: Maximum daily, 1,180 micromhos Oct. 12, 1969; minimum daily, 170 micromhos Jan. 30, 1970
Water temperatures: Maximum, 31.0°C July 1, 26, 27, 1970; minimum, freezing point on many days during December to January.
Sediment concentrations: Maximum daily, 9,020 mg/l May 6, 1971; minimum daily, 1 mg/l Oct. 19, 1970.
Sediment discharge: Maximum daily, 107,000 tons/day May 6, 1971; minimum daily, .04 ton/day Oct. 19, 1970.

REMARKS.--Analyses of major chemical constituents determined from samples which are collected at seven-day intervals.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	COLOR (PLAT- INUM- COBALT UNITS)
OCT.									
05...	.3	1.0	.13	430	240	175	660	7.9	5
12...	.4	.3	.11	544	288	214	780	7.6	5
19...	--	--	--	--	310	--	290	8.5	10
19...	.4	.0	.38	596	316	228	920	7.7	5
26...	.3	.0	.20	508	290	210	805	7.4	10
NOV.									
02...	.2	1.7	.01	183	120	98	280	6.8	5
09...	.2	1.8	.00	254	160	130	399	7.1	5
16...	.2	1.9	.00	258	150	110	430	7.2	5
18...	--	--	--	--	155	--	255	7.3	15
23...	.2	1.6	.00	276	160	130	450	7.2	5
30...	.2	1.0	.04	338	180	140	500	7.2	5
DEC.									
06...	.2	.8	.06	376	210	170	585	7.2	0
13...	.3	2.2	.00	360	200	160	527	7.2	5
17...	--	--	--	--	198	--	280	7.5	0
20...	.2	.8	.03	340	190	150	495	7.1	2
27...	.1	2.4	.00	189	110	90	287	7.0	2
JAN.									
03...	.2	2.2	.00	276	150	120	410	7.0	5
10...	.2	2.4	.00	217	120	100	327	7.0	5
17...	.1	1.9	.00	181	100	83	270	6.8	5
20...	--	--	--	--	126	--	220	7.0	0
24...	.2	2.4	.00	212	120	97	345	7.0	10
31...	.2	2.4	.00	168	96	80	278	6.9	0
FEB.									
07...	.2	3.1	.00	185	100	86	290	6.8	5
14...	.1	2.3	.00	143	84	71	235	7.0	5
18...	--	--	--	--	110	--	192	6.9	0
21...	.1	1.6	.00	207	110	92	310	7.1	5
28...	.2	1.5	.00	264	150	120	400	7.1	0
MAR.									
07...	.2	1.1	.04	132	75	60	210	7.0	0
18...	--	--	--	--	140	--	235	7.3	0
28...	.1	.7	.00	224	110	88	340	6.9	3
APR.									
04...	.2	.2	.00	220	110	88	340	7.4	5
11...	.2	1.5	.00	178	95	76	290	6.7	0
18...	.2	.1	.13	284	150	120	412	6.9	5
23...	--	--	--	--	90	--	155	6.9	5
25...	.2	.7	.12	173	94	72	268	6.7	5
MAY									
02...	.2	1.2	.08	208	110	88	330	6.9	0
09...	.2	1.9	.00	184	100	87	293	6.8	5
13...	.2	1.4	.02	150	86	69	249	6.8	5
14...	--	--	--	--	94	--	160	6.7	5
16...	.2	1.4	.00	217	129	100	342	6.9	5
23...	.2	1.0	.00	340	190	150	520	7.4	5
30...	.2	.7	.00	341	200	160	520	7.2	5
JUNE									
06...	.2	.5	.01	412	220	170	650	7.5	5
13...	1.5	3.9	.18	388	190	140	520	6.9	0
20...	.2	4.2	.00	192	110	83	300	6.9	5
23...	--	--	--	--	93	--	149	6.9	5
27...	.2	1.8	.00	303	160	120	440	7.2	0
JULY									
11...	.2	1.4	.00	232	130	89	360	7.5	4
15...	--	--	--	--	200	--	310	7.8	5
18...	.3	2.7	.00	446	250	190	658	7.2	5
25...	.2	1.9	.02	249	160	120	390	7.1	10

03207800 LEVISA FORK AT BIG ROCK, VA.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DISCHARGE (CFS)	SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLORIDE (CL) (MG/L)
AUG.										
01...	239	8.8	0	18	7.9	6.6	2.2	30	58	3.7
08...	251	8.5	10	21	9.6	9.9	1.9	34	75	5.6
15...	188	8.7	0	31	.14	18	3.0	47	120	9.7
16...	149	--	--	--	--	--	--	--	140	--
22...	184	4.6	50	52	20	25	4.6	62	180	16
29...	77	3.4	20	50	20	41	5.7	71	190	22
SEP.										
05...	54	2.1	20	60	24	57	5.4	80	230	40
12...	175	5.6	0	39	15	23	4.5	62	120	17
19...	188	8.0	0	25	14	17	4.3	50	110	12
22...	129	--	--	--	--	--	--	--	130	--
26...	159	6.2	120	44	18	24	4.6	64	150	15

DATE	DISSOLVED FLUORIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOSPHATE (PO4) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)
AUG.									
01...	.1	2.3	.00	126	78	53	185	6.8	5
08...	.1	1.0	.00	156	92	64	250	6.9	5
15...	.2	.8	.01	240	140	96	370	7.4	3
16...	--	--	--	--	170	--	215	6.8	3
22...	.3	.6	.07	382	210	160	550	7.3	7
29...	.2	.1	.00	376	210	150	600	7.0	3
SEP.									
05...	.3	.0	.04	474	250	180	730	7.1	3
12...	.2	3.3	.03	274	160	110	430	6.9	3
19...	.2	.6	.00	228	130	90	360	7.0	7
22...	--	--	--	--	160	--	230	7.7	3
26...	.2	1.7	.08	326	190	130	500	7.0	15

03207800 LEVISA FORK AT BIG ROCK, VA.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	497	240	540	377	280	400	330	300	440	420	185	720
2	550	280	557	410	283	404	340	330	500	320	253	750
3	605	235	560	410	285	370	330	359	530	380	350	710
4	710	276	570	328	250	290	340	370	540	---	365	720
5	660	310	580	195	255	280	363	391	600	500	408	730
6	680	340	585	195	280	250	380	281	650	530	425	460
7	700	361	555	224	290	210	225	180	620	540	258	450
8	700	370	580	304	280	205	175	221	570	550	250	430
9	750	399	595	303	288	235	205	293	560	450	252	410
10	820	440	600	327	290	260	234	349	610	355	245	520
11	815	440	573	330	235	275	290	400	640	360	460	420
12	780	430	583	350	320	300	311	420	510	460	258	430
13	820	456	527	367	310	330	342	249	520	445	282	330
14	860	401	495	370	235	331	350	260	220	540	360	260
15	860	425	499	270	260	342	380	300	205	630	370	370
16	840	430	503	263	270	330	400	342	240	620	440	380
17	900	449	500	270	290	340	409	380	301	690	500	340
18	920	470	500	275	290	350	412	422	321	658	551	350
19	920	480	492	340	285	341	416	440	340	360	560	360
20	920	514	495	350	290	339	420	460	300	370	600	400
21	790	480	500	350	310	370	421	440	360	500	610	420
22	770	460	225	347	330	371	267	470	210	460	550	490
23	740	450	195	342	340	369	238	520	262	479	360	450
24	740	458	254	345	345	360	245	500	338	480	380	480
25	820	450	273	245	370	330	268	510	389	390	420	460
26	805	473	260	215	380	340	280	520	455	410	419	500
27	840	460	287	271	370	330	298	580	440	400	520	430
28	876	475	310	275	400	340	173	590	460	470	590	440
29	710	540	346	225	---	329	202	580	420	480	600	490
30	287	500	360	225	---	320	246	520	440	370	610	470
31	298	---	380	278	---	319	---	470	---	360	630	---
ONTH	741	416	461	302	300	321	310	402	433	466	421	472

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.5	13.0	11.0	7.0	2.5	12.0	12.5	15.0	24.0	29.0	26.5	26.5
2	20.5	14.0	13.5	1.0	2.5	10.5	10.0	12.5	22.0	30.0	27.0	23.5
3	23.0	11.0	14.0	1.5	2.0	5.0	12.0	11.0	26.5	26.0	27.0	24.0
4	24.0	9.0	9.5	5.0	5.0	3.0	14.0	14.0	28.0	---	27.0	27.0
5	14.0	8.5	7.5	6.5	7.0	7.0	14.0	15.0	29.5	28.0	27.5	26.5
6	18.0	12.0	4.0	4.5	4.0	9.5	10.5	13.0	30.0	26.0	28.0	26.0
7	22.0	12.0	2.5	3.0	3.5	4.0	10.5	15.5	29.0	27.5	26.5	25.0
8	19.0	13.0	9.0	3.0	2.5	4.5	11.5	14.5	25.0	28.0	27.0	25.5
9	21.0	13.5	5.0	2.0	3.0	9.5	12.5	17.0	26.0	27.0	25.0	26.5
10	19.5	12.5	8.0	5.5	2.0	6.0	13.5	12.5	27.0	26.5	27.0	27.0
11	22.0	8.5	9.0	7.5	4.0	8.0	15.0	14.0	28.0	26.0	26.0	25.0
12	23.0	14.0	10.5	7.0	6.5	9.0	16.0	14.5	22.0	26.0	22.0	25.5
13	23.0	13.0	9.5	7.0	3.0	10.0	17.5	12.0	21.0	27.0	28.0	19.5
14	23.0	12.0	6.0	10.0	4.0	14.5	15.5	16.5	21.0	28.0	28.0	20.5
15	21.0	9.0	6.0	4.0	9.5	13.0	14.5	14.0	17.0	28.5	28.0	26.5
16	10.5	7.0	6.5	2.5	7.0	12.0	16.0	17.0	20.0	29.0	29.0	23.0
17	12.0	6.5	5.5	4.5	8.0	8.0	17.5	20.0	21.5	29.5	30.0	26.0
18	12.5	7.0	7.0	1.0	9.5	8.0	19.5	21.0	22.0	30.0	24.0	26.0
19	14.0	9.5	8.5	1.5	10.0	6.5	20.0	22.0	22.0	26.0	27.0	24.0
20	13.0	11.0	10.0	5.0	12.5	5.0	20.5	21.5	23.0	26.5	27.5	20.0
21	10.5	10.0	9.0	2.5	9.5	12.0	14.0	21.0	23.0	26.5	27.0	21.0
22	12.0	7.0	12.5	5.0	13.0	7.5	15.0	19.0	19.0	27.0	24.0	20.0
23	12.0	4.0	13.5	5.5	7.0	7.5	9.0	20.0	21.5	27.5	25.5	20.5
24	12.5	1.0	9.0	6.0	7.0	8.0	13.5	22.5	24.0	28.5	26.0	21.0
25	15.0	1.5	2.5	9.0	8.5	7.5	14.5	23.0	26.0	27.0	27.0	21.0
26	14.0	4.5	4.5	6.5	9.0	5.5	15.0	23.5	27.0	27.5	24.0	21.5
27	12.0	7.5	3.0	5.0	11.0	10.0	15.0	18.0	29.5	26.5	26.0	21.0
28	11.5	9.5	1.5	1.0	9.5	13.0	16.0	15.0	29.0	26.0	28.0	24.0
29	14.0	14.0	2.0	3.0	---	13.5	---	15.0	26.0	25.5	28.0	24.5
30	14.5	13.0	2.5	2.5	---	11.0	13.5	21.0	27.0	27.0	27.0	24.0
31	14.0	---	1.5	3.0	---	12.0	---	22.0	---	26.5	26.5	---
MONTH	16.5	9.5	7.0	4.5	6.5	9.0	14.5	17.0	24.5	27.5	26.5	23.5

03207800 LEVISA FORK AT BIG ROCK, VA.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	67	23	4.2	770	473	983	61	9	1.5
2	51	24	3.3	506	200	273	55	13	1.9
3	42	37	4.2	1250	688	2320	52	11	1.5
4	35	8	.76	584	282	445	50	6	.81
5	29	9	.70	395	193	206	47	11	1.4
6	24	7	.45	300	69	56	46	11	1.4
7	21	8	.45	240	45	29	42	22	2.5
8	20	5	.27	184	79	39	37	3	.30
9	18	6	.29	146	110	43	40	78	8.4
10	16	10	.43	164	150	66	42	62	7.0
11	17	12	.55	180	141	69	41	116	13
12	17	9	.41	164	56	25	79	222	47
13	16	5	.22	210	137	78	102	49	13
14	16	4	.17	180	74	36	80	91	20
15	16	7	.30	157	50	21	68	32	5.9
16	14	8	.30	130	29	10	68	28	5.1
17	14	2	.08	110	20	5.9	72	42	8.2
18	13	2	.07	100	38	10	68	53	9.7
19	13	1	.04	96	32	8.3	61	40	6.6
20	22	127	7.5	106	31	8.9	60	27	4.4
21	52	147	21	121	13	4.2	145	100	39
22	48	21	2.7	108	16	4.7	1500	135	547
23	34	12	1.1	110	35	10	1530	119	492
24	26	9	.63	94	15	3.8	731	54	107
25	21	7	.40	76	28	5.7	484	41	54
26	21	7	.40	96	49	13	373	29	29
27	18	8	.39	90	18	4.4	281	20	15
28	16	8	.35	78	16	3.4	226	15	9.2
29	123	500	166	70	15	2.8	181	22	11
30	536	562	813	65	16	2.8	154	36	15
31	632	530	904	--	--	--	140	20	7.6
TOTAL	2008	--	1934.66	6880	--	4786.9	6916	--	1485.41

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	158	28	12	627	132	223	217	26	15
2	148	65	26	476	68	87	209	32	18
3	124	65	22	434	67	79	309	203	169
4	543	270	396	1190	143	459	431	191	222
5	1980	607	3250	3190	140	1210	442	99	118
6	1050	129	366	2040	186	1020	521	90	127
7	571	45	69	1010	206	562	834	89	200
8	415	25	28	756	39	80	870	95	223
9	352	25	24	689	45	84	626	49	83
10	288	50	39	599	48	78	521	74	104
11	239	52	34	536	41	59	460	41	51
12	207	61	34	483	38	50	397	63	68
13	177	442	211	711	100	192	366	23	23
14	286	450	347	1120	300	907	338	29	26
15	408	125	138	862	200	465	348	50	47
16	411	130	144	669	150	271	340	60	55
17	386	128	133	578	80	125	304	52	43
18	342	128	118	545	70	103	273	51	38
19	274	139	103	532	60	86	274	54	40
20	215	139	81	511	55	76	276	42	31
21	189	100	51	443	50	60	244	22	14
22	211	208	118	415	48	54	220	16	9.5
23	277	147	110	389	40	42	259	49	34
24	311	143	120	338	38	35	252	41	28
25	682	432	795	297	35	28	262	24	17
26	775	191	400	276	30	22	286	60	46
27	528	28	40	272	30	22	270	46	34
28	418	29	33	233	32	20	262	47	33
29	355	119	114	--	--	--	285	44	34
30	523	134	189	--	--	--	276	47	35
31	792	36	77	--	--	--	263	38	27
TOTAL	13635	--	7622	20221	--	6499	11235	--	2012.5

03207800 LEVISA FORK AT BIG ROCK, VA.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	MEAN DISCHARGE (CFS)	APRIL MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MAY MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	JUNE MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	254	32	22	639	50	87	205	3	1.7
2	273	33	24	498	30	40	181	7	3.4
3	255	28	19	445	55	66	166	4	1.8
4	227	25	15	375	26	26	137	16	5.9
5	217	21	12	328	29	25	119	4	1.3
6	241	244	159	4410	9020	107000	110	4	1.2
7	1500	826	3350	7650	1250	25800	117	4	1.3
8	2270	269	1650	3950	400	4270	150	81	33
9	1220	108	356	2000	224	1210	150	90	36
10	723	58	113	1080	117	341	112	61	18
11	542	30	44	712	62	119	110	213	63
12	454	25	31	650	118	207	100	500	135
13	400	22	24	2660	306	2200	495	600	802
14	361	18	18	1890	133	679	2300	750	4660
15	304	9	7.4	1170	49	155	2690	700	5080
16	274	12	8.9	800	35	76	1500	175	709
17	247	6	4.0	532	41	67	712	88	169
18	222	3	1.8	495	38	50	736	1570	3120
19	195	3	1.6	405	36	39	752	175	355
20	176	2	.95	350	27	25	584	249	393
21	201	19	10	365	118	116	506	401	548
22	620	87	146	330	15	12	1730	304	1420
23	658	37	66	260	14	9.8	840	214	485
24	586	38	60	227	10	6.1	518	75	105
25	492	16	21	255	20	14	380	40	41
26	427	12	14	212	9	5.2	340	182	167
27	380	11	11	178	26	12	269	41	30
28	2170	400	2340	175	14	6.6	223	26	16
29	1900	181	929	178	11	5.3	287	349	270
30	893	46	111	223	19	11	291	358	281
31	--	--	--	231	11	6.9	--	--	--
TOTAL	18722	--	9569.65	33673	--	142862.9	16810	--	18952.6

DAY	MEAN DISCHARGE (CFS)	JULY MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	AUGUST MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	SEPTEMBER MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	273	370	273	239	121	78	55	18	2.7
2	370	144	144	205	90	50	54	15	2.2
3	247	45	30	602	134	218	61	16	2.6
4	188	25	13	1790	124	599	58	15	2.3
5	150	11	4.5	1360	170	624	54	12	1.7
6	132	13	4.6	566	80	122	54	78	11
7	134	15	5.4	365	88	87	198	174	93
8	110	17	5.0	251	135	91	159	86	37
9	90	52	13	191	83	43	98	89	24
10	180	117	57	150	82	33	72	78	15
11	190	148	76	235	90	57	59	795	127
12	280	22	17	1150	188	584	175	304	144
13	160	28	12	420	142	161	340	504	463
14	130	71	25	260	18	13	355	482	462
15	110	18	5.3	188	16	8.1	215	300	174
16	85	17	3.9	145	19	7.4	184	100	50
17	74	14	2.8	122	6	2.0	310	168	141
18	79	37	7.9	107	3	.87	243	155	102
19	159	40	17	98	3	.79	188	158	80
20	310	69	58	90	9	2.2	147	152	60
21	205	75	42	81	10	2.2	142	153	59
22	360	452	439	184	59	29	129	157	55
23	191	444	229	350	141	133	119	125	40
24	132	72	26	208	100	56	127	130	45
25	110	82	24	147	80	32	105	100	28
26	145	122	48	140	65	25	159	710	305
27	345	200	186	127	78	27	198	162	87
28	195	150	79	96	18	4.7	153	51	21
29	159	148	64	77	10	2.1	127	32	11
30	184	146	73	71	17	3.3	107	31	9.0
31	239	121	78	59	10	1.6	--	--	--
TOTAL	5716	--	2062.4	10074	--	3097.26	4445	--	2654.5

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)	150335
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)	203539.78

03473000 SOUTH FORK HOLSTON RIVER AT VESTAL, VA.

LOCATION.--Lat 36°39'06", long 81°50'39", Washington County, at gaging station on right bank 500 ft upstream from bridge on U.S. Highway 58 at Vestal, 0.7 mile downstream from Laurel Creek, 3.2 miles northwest of Damascus, 4.9 miles upstream from Middle Fork Holston River, and at mile 77.2.

DRAINAGE AREA.--301 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1949 to September 1950.
Water temperatures: October 1949 to September 1950, October 1967 to September 1971.

EXTREMES.--1970-71:
Water temperatures: Maximum, 28.0°C June 29; minimum, freezing point on several days during November to January.

Period of record:
Water temperatures: Maximum, 28.0°C June 29, 1971; minimum, freezing point on many days during winter period.

REMARKS.--Temperature records furnished by Tennessee Valley Authority.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971
(CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.5	15.5	15.0	14.0	11.0	8.5	1.5	0	2.0	1.5	11.0	8.5
2	18.5	15.5	15.0	13.5	11.0	9.5	1.5	0	1.5	1.5	10.5	9.5
3	19.0	16.0	14.0	11.5	10.5	8.5	3.0	0.5	1.5	1.0	10.0	6.0
4	19.0	14.5	11.5	6.0	10.5	6.5	6.5	3.0	4.0	1.0	6.0	3.5
5	16.0	12.0	7.0	5.5	6.5	4.5	6.5	5.0	7.0	4.0	6.0	2.0
6	16.0	13.0	9.0	6.0	5.5	2.0	5.0	3.5	6.0	4.5	7.0	4.5
7	16.0	13.5	9.0	6.5	2.0	0.5	3.5	1.5	5.5	5.0	7.0	4.0
8	16.5	15.0	9.5	6.0	3.0	0	1.5	1.0	6.0	4.5	4.0	3.0
9	18.5	15.5	10.0	7.0	3.5	0.5	3.5	1.5	4.5	2.0	5.5	1.5
10	19.0	18.0	10.5	9.5	6.0	3.5	3.5	1.0	2.0	0.5	5.0	4.0
11	20.0	18.0	10.5	10.0	7.0	5.0	7.0	2.0	4.0	1.0	8.0	5.0
12	20.5	18.5	10.5	9.5	9.0	7.0	7.0	5.5	6.0	3.5	8.0	5.5
13	20.5	18.5	10.0	9.5	7.0	5.0	8.5	6.0	6.5	2.0	10.0	7.0
14	20.0	18.5	9.5	9.0	5.0	3.5	9.5	8.0	3.0	1.0	12.0	8.5
15	19.5	18.5	9.5	6.0	4.0	1.5	9.0	5.5	4.5	2.0	12.0	10.0
16	19.5	16.5	6.0	4.5	5.5	3.5	5.5	3.5	5.5	3.0	11.0	8.5
17	16.5	12.0	5.5	3.5	5.0	4.5	4.0	3.5	6.0	4.5	9.5	6.0
18	14.0	10.0	5.5	4.5	5.5	3.5	4.0	2.0	7.0	4.5	9.0	4.5
19	13.5	10.5	8.5	5.5	6.0	4.0	2.0	1.0	8.5	5.5	8.0	6.5
20	13.5	12.0	10.0	8.0	7.0	6.0	1.0	1.0	10.0	8.0	6.5	4.5
21	14.5	13.5	8.5	6.0	8.5	7.0	1.0	1.0	9.5	7.0	8.0	3.5
22	16.0	14.0	7.0	5.0	10.0	8.5	3.0	1.0	10.5	8.5	8.5	6.0
23	16.0	13.0	7.0	3.5	10.0	9.5	6.5	3.0	9.5	5.5	9.0	6.0
24	15.5	13.0	3.5	0	9.5	4.5	6.5	5.5	6.0	5.0	7.0	4.0
25	16.5	14.5	0.5	0	5.0	3.0	9.0	6.5	8.0	5.0	6.5	4.5
26	16.5	14.5	3.0	0	3.0	0.5	8.5	4.5	9.0	7.0	6.0	4.5
27	16.5	14.5	4.5	1.5	1.5	0	4.5	1.5	11.5	9.0	9.0	4.5
28	16.0	13.0	6.5	4.5	1.0	0	1.5	1.5	10.0	8.0	11.0	6.5
29	15.0	14.0	9.0	6.5	1.5	0.5	4.0	1.5	---	---	10.5	8.5
30	15.0	13.5	10.5	8.5	2.0	0.5	7.0	4.0	---	---	9.5	6.0
31	15.0	14.0	---	---	2.0	0.5	5.5	2.0	---	---	10.0	5.5
MONTH	20.5	10.0	15.0	0	11.0	0	9.5	0	11.5	0.5	12.0	1.5

03473000 SOUTH FORK HOLSTON RIVER AT VESTAL, VA.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	[illegible]	7.0	15.5	10.5	19.5	14.5	21.5	19.5	19.0	17.0	23.0	20.0
2	[illegible]	9.0	13.5	11.0	[illegible]	16.0	21.0	20.0	19.5	18.0	22.0	20.0
3	10.5	6.0	11.0	9.0	20.5	15.0	22.0	18.5	19.5	18.5	20.5	19.0
4	11.0	7.0	13.5	9.0	21.0	17.0	23.5	19.0	20.0	17.0	21.0	18.0
5	12.0	9.0	14.0	10.0	21.5	18.0	21.5	19.0	21.0	18.5	22.0	18.5
6	11.0	7.0	14.0	13.0	23.0	18.5	21.5	19.5	19.5	17.0	22.0	19.0
7	9.5	5.5	13.5	12.0	22.0	19.0	23.5	19.5	19.5	17.0	21.5	19.0
8	10.5	6.0	14.5	11.5	21.0	19.0	24.0	20.0	19.5	17.0	22.0	18.5
9	13.0	7.0	14.0	11.5	20.5	19.5	25.0	20.5	21.0	18.0	23.0	19.0
10	13.5	10.0	15.5	11.0	21.0	17.0	23.0	20.5	21.5	18.5	23.0	19.0
11	13.5	8.5	15.0	13.0	22.0	18.0	23.5	20.0	20.0	18.5	22.0	20.0
12	14.5	9.5	16.5	14.0	21.5	19.0	20.5	18.5	20.0	18.0	20.0	18.5
13	15.0	11.0	16.5	14.5	20.5	19.0	21.0	18.5	20.0	17.0	18.5	17.0
14	15.0	12.0	16.5	13.0	20.0	18.5	20.5	19.5	20.0	16.5	20.0	16.5
15	14.0	9.5	16.0	13.5	18.5	16.5	21.5	19.0	21.0	17.0	20.5	16.0
16	15.0	9.5	15.0	13.0	19.0	16.5	23.5	19.5	20.5	17.0	20.5	18.0
17	16.0	10.5	17.0	13.0	18.5	16.0	23.5	20.0	20.0	18.5	19.0	16.5
18	18.0	13.0	19.0	15.0	19.0	17.0	24.5	20.5	19.0	18.0	18.5	18.0
19	18.5	13.5	19.5	15.5	20.0	17.0	23.0	19.5	21.0	17.0	20.5	18.0
20	19.0	14.5	19.5	17.0	19.0	17.0	21.5	19.5	22.0	18.5	20.5	18.0
21	17.0	14.5	19.0	16.0	20.5	17.0	21.5	18.5	23.0	19.5	20.0	17.0
22	17.0	13.5	18.5	14.5	19.5	17.0	23.0	19.0	21.0	18.5	20.0	17.0
23	15.0	10.0	18.5	14.5	19.5	16.5	24.0	20.0	21.0	18.5	20.5	18.0
24	15.0	10.0	19.0	16.0	24.5	19.5	22.0	20.5	22.0	18.5	20.5	17.0
25	15.5	10.5	20.5	17.0	25.5	21.5	21.5	20.0	21.0	17.0	19.5	16.5
26	14.0	12.0	20.5	16.0	24.0	22.0	21.0	19.5	21.0	18.5	18.0	16.0
27	15.0	10.5	20.0	16.0	25.5	23.0	20.5	19.5	21.0	18.5	20.0	16.0
28	15.5	12.0	19.5	15.5	27.0	23.5	23.5	19.0	20.5	18.0	21.0	17.0
29	14.5	11.0	15.5	13.5	28.0	24.0	21.5	20.0	19.5	16.5	21.0	18.5
30	14.5	10.5	14.0	13.0	26.5	24.0	21.5	19.5	21.0	16.5	21.0	18.5
31	---	---	16.5	13.0	---	---	19.5	18.0	21.0	18.0	---	---
MONTH	19.0	5.5	20.5	8.0	28.0	14.5	25.0	18.0	23.0	16.5	23.0	16.0

03490000 NORTH FORK HOLSTON RIVER NEAR GATE CITY, VA.

LOCATION.--Lat 36°36'31", long 82°34'05", Scott County, at gaging station on left bank 75 ft upstream from bridge on U.S. Highway 23, 1.6 miles downstream from Big Moccasin Creek, 2.1 miles southeast of Gate City, and at mile 8.8.

DRAINAGE AREA.--672 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1949 to September 1951.
Water temperatures: October 1949 to September 1951, October 1967 to September 1971.

EXTREMES.--1970-71:
Water temperatures: Maximum, 28.5°C July 9; minimum, freezing point on several days during November to February.

Period of record:
Water temperatures: Maximum, 31.0°C July 24, 1968, and on several days during August 1968; minimum, freezing point on many days during winter period.

REMARKS.--Temperature records furnished by Tennessee Valley Authority.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971
(CONTINUOUS ETHYL ALCOHOL-ACTUATED THERMOGRAPH)

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.5	17.0	16.0	14.5	9.0	7.0	0.5	0	1.5	0	10.5	9.0
2	19.5	18.0	15.5	15.0	10.0	9.0	0.5	0	0	0	10.5	9.5
3	20.0	18.5	15.0	11.5	10.5	9.0	1.0	0	0	0	10.0	7.0
4	19.5	16.0	11.5	9.5	10.5	8.0	3.5	1.0	3.5	0	8.0	5.0
5	16.5	15.0	9.5	8.0	8.0	6.0	4.5	3.5	6.5	3.5	6.0	4.5
6	16.5	15.0	9.5	7.0	6.0	4.0	4.0	3.5	5.5	5.0	5.5	4.5
7	17.0	15.5	9.5	8.0	4.0	2.0	3.5	2.0	5.0	5.0	6.0	5.0
8	18.0	16.0	10.0	8.0	3.0	1.0	2.0	1.5	5.5	4.5	5.0	3.5
9	19.0	17.0	10.5	8.5	3.0	1.5	3.0	2.0	4.5	2.0	4.5	3.0
10	20.0	18.5	11.0	10.0	4.5	3.0	3.5	1.5	2.0	1.0	4.5	4.0
11	21.0	19.0	12.0	10.5	5.5	4.0	4.5	3.5	2.0	0.5	6.5	4.5
12	21.5	20.0	11.5	10.5	7.0	5.5	5.5	4.5	4.0	1.5	7.0	6.0
13	21.0	20.0	11.5	10.5	6.5	5.5	6.5	5.0	4.5	3.5	9.0	7.0
14	20.5	19.5	11.0	10.0	5.5	4.0	8.0	6.5	3.5	2.0	11.0	8.5
15	20.5	19.0	10.0	8.0	4.0	3.0	8.5	5.5	3.5	2.0	11.0	10.0
16	19.0	15.5	8.0	6.0	5.0	4.0	5.5	4.0	4.5	2.0	11.0	9.5
17	15.5	13.0	6.5	5.0	5.0	4.5	4.5	4.0	5.0	3.5	9.5	8.0
18	14.0	11.5	6.0	5.0	5.0	4.0	4.0	1.5	6.5	4.5	10.0	7.0
19	15.0	11.5	8.0	6.0	5.0	4.5	1.5	0	7.0	5.5	9.0	6.5
20	14.0	13.5	8.5	7.0	6.0	5.0	0.5	0	9.5	7.0	6.5	5.0
21	15.0	13.5	7.0	6.0	8.0	6.0	0.5	0	9.0	8.5	8.0	4.5
22	16.0	15.0	7.0	5.5	9.5	8.0	2.0	0.5	9.5	8.5	8.0	5.5
23	16.0	15.0	7.0	3.5	10.0	9.5	4.5	2.0	8.5	6.5	9.0	6.0
24	15.5	15.0	3.5	0	9.5	8.0	5.0	4.5	6.5	5.5	8.5	5.0
25	16.5	15.0	0.5	0	8.0	5.0	6.0	5.0	6.5	5.0	7.0	5.0
26	17.0	15.5	1.5	0	5.0	2.0	6.0	4.5	6.5	5.5	6.0	4.5
27	17.0	15.5	3.5	1.5	2.0	1.0	4.5	1.0	9.0	6.5	8.5	4.0
28	16.0	14.5	5.0	3.5	1.0	0	1.0	0	9.5	7.0	10.0	6.5
29	15.0	14.5	6.5	5.0	1.0	0	1.5	0	---	---	10.5	8.5
30	15.5	14.5	8.5	6.0	1.5	0	3.5	1.5	---	---	10.5	8.5
31	16.0	15.0	---	---	1.0	0.5	3.5	1.5	---	---	11.0	8.0
MONTH	21.5	11.5	16.0	0	10.5	0	8.5	0	9.5	0	11.0	3.0

TENNESSEE RIVER BASIN

03490000 NORTH FORK HOLSTON RIVER NEAR GATE CITY, VA.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.0	9.0	17.0	14.5	21.0	18.0	25.0	23.5	21.0	19.5	26.0	23.5
2	10.5	8.0	15.5	14.0	20.0	19.0	25.0	23.0	21.5	20.5	25.5	24.0
3	11.5	8.0	14.0	11.5	22.0	19.0	26.0	23.0	23.0	20.5	25.0	23.5
4	13.0	9.0	14.5	10.5	24.5	20.5	26.5	23.5	25.0	22.0	25.5	23.0
5	13.5	10.0	14.5	12.0	25.5	21.5	25.5	23.5	25.5	23.5	26.0	23.5
6	12.0	9.5	14.5	13.5	27.0	23.0	25.0	24.0	25.0	23.5	26.5	24.0
7	10.5	9.0	14.0	13.0	26.5	24.0	27.0	24.0	24.5	23.0	25.0	24.0
8	12.0	8.5	14.0	13.0	25.5	22.0	28.0	24.5	24.5	22.0	26.5	24.0
9	13.5	10.5	14.5	13.5	24.0	21.5	28.5	25.5	26.0	23.5	27.0	24.0
10	14.5	11.5	15.5	13.5	25.0	22.0	28.0	24.5	26.5	24.0	27.0	24.5
11	15.0	11.5	15.5	14.5	25.0	21.5	26.0	24.0	26.0	23.5	26.5	23.5
12	15.5	13.0	16.0	15.0	25.0	23.5	25.0	23.5	24.5	23.0	24.0	21.5
13	16.5	14.0	16.5	15.0	24.0	23.5	24.0	23.0	24.5	22.0	22.0	20.5
14	17.0	14.5	16.5	14.5	25.0	23.0	24.0	22.0	24.5	22.0	23.5	20.5
15	16.5	14.0	15.5	14.5	23.5	20.5	24.5	22.0	25.0	23.0	24.5	21.0
16	17.0	14.0	16.0	14.5	21.0	20.0	26.0	23.0	25.0	23.0	23.5	21.5
17	18.5	14.0	18.5	15.0	21.0	19.5	26.5	24.0	24.5	23.5	21.5	20.5
18	19.5	15.5	20.0	16.5	22.0	20.0	28.0	24.5	24.0	23.5	21.5	20.5
19	20.5	16.5	21.5	18.5	21.0	20.0	26.0	23.5	25.5	23.0	23.5	21.0
20	21.0	18.0	21.5	19.5	20.5	20.0	24.5	22.0	26.0	24.0	23.5	21.5
21	19.5	18.0	22.0	19.5	22.0	20.0	25.0	22.0	26.5	25.0	23.0	21.0
22	20.0	17.0	21.5	19.5	21.5	19.5	26.0	23.0	25.5	24.0	23.0	21.0
23	17.0	14.0	21.5	19.0	21.0	19.5	27.0	24.0	26.0	24.0	23.5	21.5
24	16.0	14.0	22.0	19.5	22.0	20.0	25.5	24.5	25.5	24.0	23.5	21.0
25	17.0	14.0	23.0	20.0	24.0	21.0	25.0	24.0	25.5	23.0	22.0	20.5
26	16.0	14.5	23.5	19.5	24.0	22.0	24.5	23.5	25.5	24.0	20.5	20.0
27	16.5	14.0	23.5	19.5	25.0	23.0	25.0	23.5	25.5	24.0	23.0	20.0
28	18.0	14.5	21.5	19.0	26.5	23.5	26.0	23.0	25.0	23.5	24.0	21.0
29	16.5	15.5	19.0	17.0	27.0	24.5	24.5	23.0	24.5	22.0	24.5	22.0
30	16.5	14.5	19.5	16.5	26.5	24.0	24.0	23.0	25.5	22.0	24.0	22.0
31	---	---	20.0	17.0	---	---	23.0	19.5	25.5	23.5	---	---
MONTH	21.0	8.0	23.5	10.5	27.0	18.0	28.5	19.5	26.5	19.5	27.0	20.0

03527000 CLINCH RIVER AT SPEERS FERRY, VA.

LOCATION.--Lat 36°38'55", long 82°45'02", Scott County, at gaging station on right bank 200 ft downstream from bridge on U.S. Highway 58, 0.5 mile downstream from Copper Creek, 0.8 mile northwest of Speers Ferry, 1.8 miles downstream from Clinchport, and at mile 211.0.

DRAINAGE AREA.--1,126 sq mi.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	MEAN DISCHARGE (CFS)	SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	SULFATE (SO4) (MG/L)	CHLORIDE (CL) (MG/L)
OCT.										
A/ 06...	169	4.1	50	39	9.6	6.0	3.4	130	30	6.0
08...	149	3.8	0	38	11	6.4	3.1	143	32	7.4
NOV.										
02...	3160	5.8	20	36	8.4	3.7	2.8	118	23	4.6
DEC.										
01...	356	2.3	60	38	9.5	6.5	1.9	141	28	6.1
A/ 15...	868	3.2	60	31	9.2	3.9	2.0	111	23	5.0
JAN.										
07...	2600	5.0	0	28	6.6	4.2	2.2	95	20	4.8
FEB.										
01...	2410	4.8	100	29	7.0	4.0	1.8	105	20	4.7
A/ 10...	4230	4.8	80	32	8.2	2.4	1.5	114	16	4.5
MAR.										
01...	1660	4.0	20	28	7.6	3.6	1.8	108	19	4.1
APR.										
08...	4590	3.6	80	25	7.4	3.4	1.4	92	21	3.2
A/ 12...	2090	3.8	60	30	8.1	3.1	1.2	110	16	3.5
MAY										
06...	1160	3.8	0	31	8.2	3.6	1.5	116	19	4.9
JUNE										
01...	1420	1.2	0	34	10	5.0	1.5	136	23	4.8
A/ 15...	3420	4.4	70	28	8.5	3.3	2.1	112	18	3.0
JULY										
09...	643	5.2	0	35	12	5.1	1.5	140	27	4.1
AUG.										
02...	3020	6.5	100	38	10	3.0	2.4	140	17	3.2
A/ 10...	932	4.4	140	34	10	3.1	2.0	129	18	3.5
SEP.										
A/ 01...	307	2.1	50	42	9.6	5.7	2.4	146	24	5.5

A/ Chemical analysis furnished by Tennessee Valley Authority.

03527000 CLINCH RIVER AT SPEERS FERRY, VA.--Continued

PERIOD OF RECORD.--Chemical analyses: May 1968 to September 1971.
Water temperatures: November 1964 to September 1967.

REMARKS.--Water temperatures measured once monthly at time of sample collection. Samples for chemical analyses furnished by Tennessee Valley Authority every two months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPECI-FIC COND-UCTANCE (MICRO-MHOS)	PH (UNITS)	TEMP-ERATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)
OCT.										
06...	--	--	.11	184	138	31	270	7.7	15.0	5
08...	.1	2.4	.05	171	140	23	340	7.9	16.0	8
NOV.										
02...	.0	4.9	.15	161	120	27	270	7.7	14.5	35
DEC.										
01...	.1	2.9	.03	165	130	18	300	7.9	9.5	5
15...	--	.5	.18	147	115	24	240	7.1	5.0	5
JAN.										
07...	.1	3.7	.07	120	97	19	216	7.7	4.0	3
FEB.										
01...	.0	4.2	.06	134	100	16	227	7.7	1.0	5
10...	--	1.1	.26	126	114	20	222	7.4	2.0	5
MAR.										
01...	.1	3.3	.04	126	100	13	235	7.9	10.5	5
APR.										
08...	.0	2.0	.00	111	93	18	205	7.2	9.0	10
12...	--	.5	.12	127	109	19	220	7.3	12.0	5
MAY										
06...	.1	2.2	.03	136	110	16	245	7.7	13.0	5
JUNE										
01...	.1	1.8	.00	151	130	14	280	7.9	19.0	5
15...	--	.7	.57	142	106	14	225	7.2	20.0	7
JULY										
09...	.1	5.9	.05	164	140	21	280	7.6	21.0	5
AUG.										
02...	.1	4.2	.14	160	140	22	275	7.6	20.5	23
10...	--	.7	.15	152	126	20	242	7.8	24.0	4
SEP.										
01...	--	--	--	169	145	25	300	8.0	23.5	5

PART 3. GROUND-WATER RECORDS

ACCOMACK COUNTY

375600N0752800.2. Local number 67M2. (Formerly 8a). U.S. Naval Air Station well B31, Wallops Station. Drilled unused water-table well in sand of Columbia Group of Pleistocene age, diam 8 in, depth about 60 ft, cased with steel. Lsd 34.10 ft above msl. MP top of casing 6.09 ft above lsd. Highest water level, 17.82 May 9, 1963; lowest, 22.31 January 20, 1967. Records available: 1963-71.

Date	Water level	Date	Water level	Date	Water level
Jan. 27, 1969	21.38	Apr. 15, 1970	21.91	Jan. 26, 1971	21.41
Feb. 24	21.76	Aug. 6	20.46	Aug. 25	21.01

ALBEMARLE COUNTY

380334N0782711.1. Local number 43N1. Key West Development, Charlottesville. Virginia Division of Water Resources well 28. Drilled unused water-table well in Lynchburg Formation, diam 6 in, depth 409 ft, cased to 52 ft. Lsd about 335 ft above msl. MP top of casing 4 in above lsd. Highest water level, 11.58 May 31, 1971; lowest, 19.50 October 15, 1968. Records available: 1967-71. Records furnished by Virginia Division of Resources.

Lowest water level for the day, from recorder graph, water year October 1966 to September 1967

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	...	17.45	16.69	16.51	...	...	...	19.04	...
10	...	...	...	...	17.69	14.60	16.71	...	...	...	19.04	...
15	...	...	...	...	17.59	15.25	16.90	...	...	...	19.15	...
20	...	...	...	...	17.49	15.28	17.13	...	...	...	19.26	...
25	...	...	...	...	16.52	15.42	17.34	...	...	...	18.10	18.50
Eom	...	...	...	...	...	...	17.39	...	...	...	...	18.61

Water year October 1967 to September 1968

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	18.70	18.74	18.68	...	16.68	...	17.32	18.04	18.18	18.45	17.77	18.44
10	18.80	18.82	18.69	...	16.70	...	17.36	18.06	18.24	18.50	17.21	18.40
15	18.87	18.86	17.45	...	16.90	17.41	17.47	18.12	18.39	18.09	17.75	18.61
20	18.85	18.92	17.90	...	17.10	16.87	17.72	18.25	18.45	18.00	17.86	18.78
25	18.85	18.94	17.92	...	...	17.22	17.82	18.38	18.50	18.07	17.95	18.88
Eom	18.75	18.99	...	16.62	...	17.32	17.84	18.02	18.65	18.00	18.19	19.01

Water year October 1968 to September 1969

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	19.13	19.45	19.05	18.96	18.57	17.76	16.89	17.56	...	...	...	...
10	19.20	19.48	19.01	19.00	18.50	16.70	17.14	17.59	...	...	...	...
15	19.50	19.12	18.90	19.10	18.37	17.16	17.20	...	...	...	...	...
20	19.24	19.19	18.98	19.14	18.34	17.30	17.29	...	...	...	...	...
25	19.31	19.18	19.00	18.36	17.99	16.21	17.28	...	...	...	...	...
Eom	19.43	19.20	19.00	18.63	...	16.78	17.45	...	...	...	...	...

Water year October 1969 to September 1970

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	17.17	17.90	16.20	...	...	15.59	16.70	17.48	18.27	18.30	18.65
10	16.60	17.67	17.80	16.57	16.27	16.85	16.14	16.82	17.59	18.30	18.38	18.79
15	16.79	17.70	17.50	16.94	17.11	17.02	16.33	17.01	17.73	18.34	18.44	18.95
20	16.88	17.64	17.58	16.34	17.00	16.99	16.40	17.03	17.87	18.40	18.52	19.07
25	17.02	17.76	17.58	16.45	...	16.88	16.60	17.18	18.05	18.25	18.50	19.14
Eom	17.10	17.73	17.32	...	...	16.43	16.73	17.35	18.28	18.38	18.63	19.20

Water year October 1970 to September 1971

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	19.27	18.54	18.56	18.08	17.92	15.33	17.00	17.06	13.97	16.31	17.50	18.23
10	19.33	18.85	18.55	17.48	16.80	16.22	15.78	17.23	14.04	16.56	17.65	18.34
15	19.39	18.25	18.52	17.51	15.07	16.56	16.34	17.26	15.18	16.60	17.83	18.18
20	19.45	18.37	18.28	17.65	16.31	16.71	16.53	17.11	15.30	16.87	17.93	18.24
25	19.37	18.50	17.88	17.71	16.04	16.95	16.77	16.85	15.78	17.04	18.08	18.28
Eom	19.27	18.53	18.10	17.80	...	16.88	16.93	11.58	16.14	17.27	18.20	18.27

APPOMATTOX COUNTY

372133N0784937.1. Local number 40G1. Town of Appomattox. Virginia Division of Water Resources well 12. Drilled unused water-table well in bedrock, diam 8 in, depth 288 ft, cased to 40 ft. Lsd about 860 ft above msl. MP top of casing one ft above lsd. Highest water level, 46.27 December 8, 1971; lowest, 51.68 December 20, 1970. Records available: 1967-71. Records furnished by Virginia Division of Water Resources.

Lowest water level for the day, from recorder graph, water year October 1967 to September 1968

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	50.00	50.47	50.46	50.50	...	49.26	48.98	48.56	48.28	48.41	48.65
10	...	50.06	50.50	50.41	49.86	...	49.15	48.83	48.47	48.20	48.36	48.64
15	49.78	50.20	50.40	50.03	...	...	49.09	48.76	48.48	48.23	48.48	48.83
20	49.79	50.19	50.53	50.17	...	...	49.01	48.75	48.38	48.26	48.49	48.94
25	49.73	50.29	50.34	50.13	...	...	49.04	48.80	48.27	48.34	48.96	48.91
Eom	49.83	50.50	50.37	50.09	...	...	48.89	48.60	48.30	48.40	48.57	49.11

Water year October 1968 to September 1969

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	49.22	49.70	50.18	50.46	50.08	50.00	49.29	48.81	48.49	...	...	...
10	49.23	49.84	50.26	50.10	50.18	49.82	49.22	48.72	48.47	...	...	...
15	49.28	49.89	50.17	50.16	50.10	49.86	49.21	48.72	48.37	...	...	...
20	49.40	50.00	50.31	50.17	50.00	49.70	49.26	48.59	48.34	...	...	...
25	49.47	50.03	50.40	50.17	49.93	49.56	49.06	48.50	48.32	...	...	...
Eom	49.70	50.16	50.41	50.10	...	49.54	...	48.46	...	...	...	...

372133N0784937.1.--Continued

Lowest water level for the day, from recorder graph, water year October 1969 to September 1970

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	49.90	50.61	50.93	51.25	50.99	50.79	50.38	50.03	50.11	50.50	50.83
10	...	50.06	50.60	50.99	50.99	50.98	50.66	50.29	50.00	50.13	50.51	50.91
15	49.63	50.26	50.63	51.08	51.12	51.04	50.68	50.30	50.03	50.19	50.63	51.02
20	49.63	50.30	50.79	51.06	51.20	50.92	50.52	50.17	50.04	50.24	50.60	51.11
25	49.79	50.38	50.89	51.04	51.07	50.92	50.58	50.08	50.00	50.29	50.73	51.18
Eom	49.88	50.35	50.96	51.19	...	50.88	50.53	50.07	50.06	50.34	50.80	51.20
Water year October 1970 to September 1971												
5	51.30	51.50	51.62	51.66	51.30	51.02	50.28	49.70	48.83	48.18	47.80	47.45
10	51.40	51.42	51.60	51.45	51.40	50.82	50.19	49.60	48.84	48.08	47.68	47.40
15	51.40	51.49	51.65	51.48	51.25	50.70	50.02	49.50	48.70	47.97	47.68	47.46
20	51.50	51.44	51.68	51.49	51.07	50.62	49.80	49.30	48.53	47.95	47.63	47.38
25	51.46	51.53	51.69	51.43	51.05	50.60	49.84	49.19	43.46	47.80	47.62	47.40
Eom	51.47	51.51	51.59	51.45	...	50.47	49.80	...	48.34	47.83	47.60	47.27

ARLINGTON COUNTY

385346N0770737.1. Local number 53V1. (Formerly 1). Arlington County School Dept., Langston School. 4854 Lee Highway, Arlington. Dug unused water-table well in Brandywine Formation of Pleistocene age and Bryn Mawr (?) Gravel of Pliocene (?) age, overlying the Sykesville Formation of Precambrian age, diam 24 in, depth 35 ft. Lsd 410 ft above msl. MP inner flange of manhole at lsd. Highest water level, 17.74 April 20, 1935; lowest, 34.80 January 4, 1932. Records available: 1931-71.

Date	Water level	Date	Water level	Date	Water level
June 26, 1969	28.17	Apr. 27, 1970	24.35	Jan. 29, 1971	27.44
July 25	28.10	May 27	24.11	Feb. 26	26.20
Aug. 26	26.28	June 24	24.66	Mar. 30	24.90
Sept. 25	26.33	July 29	24.38	Apr. 28	24.25
Oct. 24	27.34	Aug. 31	26.27	May 28	23.98
Nov. 26	28.27	Sept. 30	27.28	June 28	23.32
Dec. 29	28.64	Oct. 29	28.19	July 30	24.34
Jan. 26, 1970	27.39	Nov. 30	28.43	Aug. 31	24.84
Feb. 27	26.32	Dec. 31	28.35	Sept. 30	25.12
Mar. 25	26.00				

385253N0770423.1. Local number 54V3. (Formerly 4.) National Capitol Parks. Arlington National Cemetery. Dug unused water-table well in terrace gravels of Recent age and Potomac Group of Early and Late Cretaceous age, diam 4 ft, depth 50 ft. Lsd 205 ft above msl. MP top of casing 3.00 ft above lsd. Highest water level, 41.39 June 2, 1958; lowest, 44.90 March 4, 1966. Records available: 1958-71.

Date	Water level	Date	Water level	Date	Water level
Jan. 2, 1969	43.38	Dec. 29, 1969	43.29	Nov. 30, 1970	43.37
31	43.50	Jan. 26, 1970	43.31	Dec. 31	43.15
Feb. 27	43.60	Feb. 27	43.20	Jan. 29, 1971	43.53
Mar. 26	43.62	Mar. 25	43.06	Feb. 26	43.50
Apr. 28	43.63	Apr. 29	42.79	Mar. 31	42.94
May 28	43.68	May 26	42.45	Apr. 28	42.53
June 26	43.80	June 24	42.42	May 28	42.29
July 29	43.85	July 29	e42.45	June 28	42.10
Aug. 26	43.52	Aug. 31	42.47	July 30	42.07
Sept. 25	43.05	Sept. 30	42.85	Aug. 31	42.24
Oct. 27	42.87	Oct. 29	43.16	Sept. 30	42.35
Nov. 26	43.03				

e Estimated.

BOTETOURT COUNTY

372744N0795841.1. Local number 31H1. Universal-Atlas Cement Co., Haymakertown. Virginia Division of Water Resources well 14. Drilled unused well in the Conococheague Formation, diam 6 in, depth 399 ft. Lsd about 1340 ft above msl. MP top of casing 0.5 ft above lsd. Highest water level, 2.90 October 31, 1971; lowest, 5.48 September 30, 1968. Records available: 1967-71. Records furnished by Virginia Division of Water Resources.

Lowest water level for the day, from recorder graph, water year October 1967 to September 1968

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	4.35	4.27	3.87	4.62	4.45	4.60	5.00	5.18	5.21	5.33
10	...	...	4.65	4.36	4.26	4.72	4.48	4.80	4.50	5.26	5.12	5.34
15	...	5.12	4.27	4.38	4.35	4.10	4.54	4.60	4.66	5.22	5.07	5.40
20	...	5.21	4.35	4.45	4.38	4.10	4.61	4.85	4.83	5.24	5.10	5.41
25	...	5.26	4.41	3.74	4.45	4.32	4.61	4.84	5.06	5.32	5.30	5.47
Eom	...	5.39	4.51	3.19	...	4.41	4.49	4.75	5.16	5.23	5.33	5.48
Water year October 1968 to September 1969												
5	5.38	4.74	4.58	4.51	4.10	4.22	4.33	4.82	5.18	...	4.60	4.75
10	5.28	4.77	4.76	4.69	4.10	3.70	4.45	4.73	...	4.37	4.80	4.88
15	5.23	4.13	4.85	4.91	4.28	4.20	4.54	4.85	...	4.55	4.80	5.00
20	3.65	4.21	4.92	4.68	4.40	4.30	4.50	4.74	...	4.78	4.56	5.02
25	4.18	4.35	4.61	4.12	4.32	4.18	4.60	4.98	...	4.80	4.32	4.85
Eom	4.48	4.57	4.30	4.31	...	4.31	4.70	5.17	...	4.89	4.66	5.05

372744N0795841.1.--Continued

Lowest water level for the day, from recorder graph, water year October 1969 to September 1970

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	4.42	5.25	5.35	4.15	4.18	4.39	4.10	4.32	5.14	5.24	4.92	4.98
10	4.62	...	4.71	4.32	4.03	4.49	4.20	4.58	5.26	5.25	4.76	5.07
15	4.85	...	4.30	4.40	4.21	4.57	4.26	4.70	5.07	5.35	4.28	5.13
20	5.03	...	4.55	4.28	4.05	4.40	4.31	4.81	5.03	5.38	4.41	5.14
25	5.20	...	4.72	4.39	4.24	4.32	4.37	4.93	5.20	5.00	4.60	5.19
Eom	5.33	...	2.93	4.30	...	4.32	4.37	5.07	5.26	4.62	4.87	5.20
				Water year October 1970 to September 1971								
5	5.25	3.39	4.40	4.34	4.36	3.50	4.37	4.30	3.90	4.40	4.31	4.92
10	5.22	4.05	4.47	4.29	4.18	4.03	3.78	4.38	4.19	4.41	4.49	5.04
15	5.20	3.89	4.57	4.20	3.42	4.22	4.09	4.20	4.29	4.28	4.63	4.50
20	5.22	4.16	4.42	4.40	3.90	4.31	4.20	4.20	4.22	4.37	4.67	4.41
25	5.19	4.23	4.20	4.40	3.92	4.36	4.28	4.32	4.20	4.40	4.80	4.18
Eom	2.90	4.31	4.38	4.40	...	4.31	4.30	3.09	4.32	4.35	4.92	4.32

CITY OF COLONIAL HEIGHTS

371644N0772446.1. Local number 51G1. (Formerly 36.) Johnson and Swearingen. Pilcher well, Matoaka Manor. Drilled unused water-table well in Petersburg Granite of late Paleozoic age, diam 6 in, depth 100 ft (previously reported 139 ft), cased with steel to 50 ft. Lsd 57.30 ft above msl. MP top of casing one ft above lsd. Highest water level, 11.13 January 18, 196[illegible]; lowest, 19.09 January 14, 1942. Records available: 1939-71.

Date	Water level	Date	Water level	Date	Water level
Jan. 28, 1969	17.53	Nov. 25, 1969	15.64	Nov. 24, 1970	17.17
Feb. 26	16.20	Dec. 29	15.55	Dec. 28	17.49
Mar. 26	14.05	Jan. 28, 1970	14.74	Jan. 28, 1971	17.07
Apr. 28	13.76	Feb. 25	14.84	Feb. 25	15.58
May 27	14.55	Mar. 26	14.83	Mar. 29	14.83
June 5	14.76	Apr. 28	13.98	Apr. 28	14.28
26	15.05	May 27	14.69	May 27	14.60
July 15	15.29	June 26	15.37	June 28	14.33
30	15.34	July 28	15.93	July 28	15.19
Aug. 27	14.24	Aug. 26	16.25	Aug. 25	15.49
Sept. 26	14.72	Oct. 1	16.66	Sept. 28	16.36
Oct. 29	15.06	28	17.16		

FAIRFAX COUNTY

385152N0772113.1. Local number 52U1. (Formerly 1). Atwell Somerville. Fair Acres Farm. Northwest of Fairfax on U.S. Highway 50. Dug unused water-table well in Wissahickon Schist of early Paleozoic (?) age, diam 4 ft, depth 24 ft. Lsd 400 ft above msl. MP top of access pipe 3.05 ft (previously reported top of wood recorder platform 5.05 ft) above lsd (since November 30, 1962). Highest water level, 9.63 April 30, 1952; lowest, 23.58 December 26, 1931. Records available: 1931-71.

Date	Water level	Date	Water level	Date	Water level
Jan. 27, 1969	16.14	Dec. 31, 1969	16.04	Nov. 30, 1970	16.32
Feb. 27	15.52	Jan. 26, 1970	15.43	Dec. 31	15.81
Mar. 26	15.20	Feb. 27	14.15	Jan. 29, 1971	14.99
Apr. 24	15.43	Apr. 1	13.62	Feb. 26	13.14
May 26	16.10	Apr. 27	12.88	Mar. 31	13.11
June 26	16.38	May 26	13.51	Apr. 30	12.97
July 25	16.70	June 24	14.62	May 28	12.55
Aug. 26	16.72	July 29	15.47	June 28	12.83
Sept. 25	16.19	Aug. 31	16.31	July 30	14.45
Oct. 24	16.79	Sept. 30	17.15	Aug. 31	15.01
Nov. 28	17.15	Oct. 29	17.67	Sept. 30	15.14

384518N0771635.1. Local number 52U4. (Formerly 6). Sydenstricker Church. East of intersection of County roads 641 and 643, Springfield. Dug unused water-table well in granite of undetermined age, diam 24 in, depth 28 ft. Lsd 340 ft above msl. MP hole in cement platform 0.67 ft above lsd. Highest water level, 14.93 May 1, 1962; lowest, 27.57 November 30, 1964. Records available: 1957-71.

Date	Water level	Date	Water level	Date	Water level
Jan. 27, 1969	23.03	Dec. 29, 1969	22.71	Nov. 30, 1970	22.92
Feb. 27	22.01	Jan. 26, 1970	21.25	Dec. 31	22.27
Mar. 26	21.13	Feb. 27	19.82	Jan. 29, 1971	21.22
Apr. 24	20.50	Mar. 25	19.15	Feb. 26	19.81
May 26	20.22	Apr. 29	17.50	Mar. 31	18.59
June 26	20.73	May 27	17.05	Apr. 29	17.51
July 25	21.70	June 24	17.55	June 1	16.44
Aug. 26	22.22	July 29	19.03	28	16.77
Sept. 26	22.57	Aug. 31	20.44	July 30	18.86
Oct. 27	23.06	Sept. 30	22.03	Aug. 31	20.53
Nov. 28	23.38	Oct. 29	22.97	Sept. 30	21.00

FLOYD COUNTY

365436N0801904.1. Local number 28D1. Town of Floyd. Virginia Division of Water Resources well 20. Drilled unused water-table well drilled in Lynchburg Formation, diam 8 in, depth 90 ft. Lsd about 2460 ft above msl. MP top of casing 10 in above lsd. Highest water level, 15.30 December 15, 1971; lowest, 18.85 October 29, 1970. Records available: 1969-71. Records furnished by Virginia Division of Water Resources.

Lowest water level for the day, from recorder graph, water year October 1968 to September 1969

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	...	...	...	16.88	16.82	17.23	17.20	17.00	17.28
10	...	...	...	...	...	...	16.83	16.84	17.27	17.01	17.11	17.40
15	...	...	...	...	...	...	16.82	16.98	17.20	17.04	17.21	17.48
20	...	...	...	...	...	...	16.86	16.95	17.00	17.06	17.15	17.59
25	...	...	...	...	...	...	16.81	17.00	17.10	16.92	17.11	17.52
Eom	...	...	...	...	...	...	16.82	17.10	17.12	17.07	17.26	17.65
				Water year October 1969 to September 1970								
5	17.66	17.74	17.98	16.80	16.65	16.34	16.22	16.12	16.27	16.98	17.54	17.78
10	17.58	17.85	17.95	16.73	16.40	16.29	16.15	16.10	16.36	17.10	17.56	17.90
15	17.62	17.99	17.40	16.72	16.43	16.37	16.20	16.12	16.48	17.22	17.49	18.00
20	17.65	17.92	17.36	16.67	16.40	16.32	16.17	16.14	16.62	17.40	17.48	18.10
25	17.75	17.96	17.39	16.68	16.28	16.35	16.28	16.16	16.70	17.36	17.60	18.22
Eom	17.80	17.91	16.98	16.78	...	16.43	16.26	16.29	16.83	17.40	17.70	18.30
				Water year October 1970 to September 1971								
5	18.44	18.35	18.57	18.70	18.70	17.55	17.57	17.49	16.10	16.00	16.63	17.40
10	18.60	18.38	18.65	18.60	18.39	17.44	17.44	17.40	16.04	16.09	16.72	17.52
15	18.67	18.32	18.74	18.64	17.88	17.40	17.38	17.20	15.99	16.19	16.91	17.59
20	18.78	18.35	18.75	18.70	17.77	17.43	17.34	16.93	15.91	16.33	17.02	17.60
25	18.79	18.43	18.64	18.70	17.62	17.52	17.39	16.70	15.96	16.40	17.14	17.47
Eom	18.76	18.45	18.72	18.74	...	17.51	17.42	16.29	16.02	16.55	17.29	17.50

CITY OF FRANKLIN

364047N0765524.1. Local number 55B22. (Formerly 205). City of Franklin. 5th Ave. and Middle St. Jetted observation well in sand of Potomac Group of Early and Late Cretaceous age, diam 4 in, depth 354 ft, cased with steel to 335 ft. Lsd 21.24 ft above msl. MP top edge of manhole at lsd (previously reported top of casing 0.50 ft below lsd). Highest water level, 14.5 June 25, 1942; lowest, 178.8 January 4, 1969. Records available: 1942-71. Water level affected by local pumpage.

Date	Water level	Date	Water level	Date	Water level
Jan. 4, 1969	178.8	Aug. 27, 1969	166.30	Nov. 4, 1970	177.86
11	157.5	Dec. 3	165.21	Dec. 14	178.40
18	158.3	Jan. 22, 1970	165.77	28	152.32
25	163.0	Mar. 2	163.20	Jan. 25, 1971	174.15
Feb. 28	158.47	Apr. 8	169.84	Mar. 8	177.40
Mar. 28	162.33	May 18	173.26	Apr. 19	167.79
Apr. 30	164.13	July 8	167.98	June 2	171.83
May 27	168.22	Aug. 12	174.41	July 12	169.62
July 28	169.22	Sept. 22	178.59	Sept. 2	169.89

HALIFAX COUNTY

364550N0785623.1. Local number 39C1. Town of Halifax. Virginia Division of Water Resources well 11. Drilled unused water-table well in bedrock, diam 8 in, depth 303 ft, cased to 52 ft. Lsd about 380 ft above msl. MP top of casing 15 in above lsd. Highest water level, 41.30 December 26, 1971; lowest, 45.09 December 30, 1968. Records available: 1968-71. Records furnished by Virginia Division of Water Resources.

Lowest water level for the day, from recorder graph, water year October 1967 to September 1968

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	...	...	...	44.42	44.39	44.32	44.36	44.50	44.45
10	...	...	...	...	...	...	44.42	44.50	44.30	44.42	44.58	44.32
15	...	...	...	...	...	...	44.39	44.49	44.26	44.42	44.52	44.39
20	...	...	...	...	...	...	44.36	44.42	44.22	44.44	44.51	44.44
25	...	...	...	...	...	...	44.38	44.48	44.25	44.47	44.55	44.38
Eom	...	...	...	...	...	...	44.32	44.35	44.32	44.49	44.52	44.48
				Water year October 1968 to September 1969								
5	44.53	44.64	44.87	45.04	44.72	44.72	44.42	44.25	44.06	43.90	43.74	43.62
10	44.52	44.73	44.98	45.00	44.84	44.60	44.40	44.22	44.02	43.87	43.69	43.56
15	44.60	44.83	44.84	45.03	44.73	44.64	44.42	44.24	43.96	43.90	43.69	43.51
20	44.54	44.85	44.92	45.00	44.70	44.59	44.47	44.14	...	43.82	43.63	43.52
25	44.57	44.87	45.00	44.80	44.66	44.52	44.37	44.10	...	43.78	43.59	43.45
Eom	44.72	44.97	45.02	44.74	...	44.61	44.32	44.07	...	43.80	43.60	43.47
				Water year October 1969 to September 1970								
5	43.53	43.47	43.67	43.84	...	43.88	43.88	43.68	43.33	43.25	43.26	43.38
10	43.50	43.51	43.62	...	43.77	43.86	43.81	43.56	43.30	43.23	43.25	43.44
15	43.52	43.61	43.68	...	43.90	43.94	43.86	43.58	43.31	43.24	43.32	43.50
20	43.48	43.60	43.70	...	44.03	43.88	43.72	43.50	43.30	43.23	43.27	43.56
25	43.55	43.64	43.78	...	43.87	43.88	43.80	43.42	43.24	43.26	43.34	43.60
Eom	43.50	43.51	43.78	...	...	43.90	43.77	43.45	43.27	43.20	43.35	43.58

364550N0785623.1.--Continued

Lowest water level for the day, from recorder graph, water year October 1970 to September 1971

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	43.70	43.93	44.16	44.35	44.39	44.43	44.03	43.80	43.52	43.19	42.99	42.70
10	43.76	43.99	44.14	44.30	44.50	44.30	44.10	43.80	43.50	...	42.89	42.66
15	43.77	44.05	44.23	44.37	44.40	44.22	44.02	43.79	43.41	43.10	42.87	42.70
20	43.89	44.05	44.26	44.40	44.30	44.20	43.90	43.67	43.36	43.08	42.85	42.66
25	43.85	44.20	44.22	44.36	44.37	44.27	43.89	43.60	43.30	43.00	42.83	42.64
Eom	43.97	44.16	44.26	44.40	...	44.19	43.88	43.60	43.28	43.00	42.77	42.50

CITY OF HOPEWELL

371801N0771642.1. Local number 52G1. (Formerly 13). Old Dominion Water Corp., Hopewell. Drilled unused artesian well in sand of Potomac Group of Early and Late Cretaceous age, diam 6 in, reported depth 300 ft, cased with steel. Lsd 50.26 ft above msl. MP top of casing 0.34 ft above lsd. Highest water level, 20.73 January 25, 1954; lowest, 56.95 August 14, 1943. Records available: 1939-71.

Date	Water level	Date	Water level	Date	Water level
Jan. 3, 1969	39.85	Dec. 5, 1969	38.61	Nov. 6, 1970	37.86
10	39.64	12	36.60	13	33.95
17	40.07	19	38.44	20	36.81
24	36.65	26	38.16	27	37.25
31	39.38	Jan. 2, 1970	37.98	Dec. 4	37.53
Feb. 7	39.11	9	38.41	11	37.80
14	38.27	16	38.61	18	37.42
21	39.26	23	38.68	25	37.58
28	38.12	30	38.54	Jan. 1, 1971	37.32
Mar. 7	37.66	Feb. 6	37.66	8	37.56
14	38.61	13	38.27	15	37.68
21	39.11	20	37.79	22	37.62
28	39.08	27	38.18	29	37.59
Apr. 4	39.43	Mar. 6	38.27	Feb. 5	37.88
11	38.84	13	37.94	12	36.38
18	39.05	20	38.00	19	37.02
25	38.95	27	38.15	26	37.16
May 2	39.25	Apr. 3	36.11	Mar. 5	35.92
9	38.99	10	37.89	12	37.18
16	39.41	17	38.16	19	37.56
23	39.08	24	38.19	26	37.20
30	39.04	May 1	38.20	Apr. 2	36.76
June 6	39.05	8	38.21	9	35.32
13	39.07	15	38.19	16	37.02
20	38.48	22	38.32	23	37.13
27	38.56	29	38.18	30	37.35
July 4	38.78	June 5	38.03	May 7	37.43
11	37.22	12	38.08	14	37.51
18	38.34	19	38.12	21	36.02
25	38.25	26	38.07	28	36.77
Aug. 1	37.13	July 3	38.03	June 4	35.83
8	33.83	10	37.84	11	36.51
15	31.53	17	38.15	18	36.62
22	33.21	24	37.42	25	36.64
29	38.33	31	37.74	July 2	36.66
Sept. 5	38.62	Aug. 7	38.03	9	36.97
12	38.82	14	37.95	16	37.16
19	38.84	21	37.74	23	37.06
26	38.47	28	37.86	30	37.09
Oct. 3	37.88	Sept. 4	38.04	Aug. 6	38.80
10	38.24	11	38.19	13	36.97
17	38.36	18	38.29	20	36.89
24	38.80	25	38.29	27	36.78
31	38.82	Oct. 2	38.17	Sept. 3	36.59
Nov. 7	38.32	9	38.35	10	36.76
14	37.91	16	38.21	17	36.70
21	38.71	23	38.11	24	36.93
28	38.85	30	38.19		

ISLE OF WIGHT COUNTY

364059N0765449.1. Local number 55B16. Union-Camp Corp., Franklin. Lumberyard well. Drilled observation well in sand of Potomac Group of Early and Late Cretaceous age, diam 6 in, depth 305 ft, cased to 286 ft. Lsd 25 ft above msl. MP from June 6, 1960 to February 18, 1969 was top of casing 0.5 ft above lsd (previously reported top edge of recorder platform 3.2 ft above lsd: to correct error in previously reported measurements from June 6, 1960 to April 27, 1966, add 2.70 ft to depth below land surface). MP top edge of recorder shelf 3.5 ft above lsd since February 18, 1969. Highest water level, 99.00 December 27, 1960; lowest, 186.34 October 15, 1970. Records available: 1960-71. Water level affected by local pumpage.

364059N0765449.1.--Continued

Date	Water level	Date	Water level	Date	Water level
Jan. 6, 1966	118.40	Dec. 7, 1966	138.6	Sept. 8, 1967	152.0
14	122.80	14	138.0	14	158.3
19	123.60	20	140.2	26	157.0
27	122.55	28	127.8	Oct. 4	156.9
Feb. 3	123.41	Jan. 4, 1967	140.2	13	156.7
9	123.70	10	141.2	24	154.8
18	123.62	18	140.4	27	159.3
25	122.70	24	141.3	Nov. 7	163.6
Mar. 2	122.82	31	142.2	9	164.0
8	123.30	Feb. 7	141.9	17	165.8
16	123.23	15	139.9	24	163.8
24	123.11	20	140.6	Dec. 1	166.1
Apr. 1	122.80	Mar. 1	141.8	8	162.5
14	122.90	7	139.8	14	162.8
20	122.87	15	140.1	21	162.3
27	124.50	23	141.8	28	151.6
May 17	124.6	28	145.1	Jan. 9, 1968	167.0
25	125.2	Apr. 6	142.1	19	160.7
June 2	125.38	11	142.8	25	160.7
10	125.15	20	144.4	31	160.7
24	125.50	27	143.7	Feb. 9	163.0
July 7	127.20	May 15	145.1	16	162.9
14	126.7	31	146.3	22	163.6
Sept. 12	139.0	June 1	146.3	27	164.4
22	136.8	13	160.5	Mar. 6	162.5
29	136.3	23	152.7	15	164.8
Oct. 12	135.9	July 12	150.1	19	164.0
20	135.2	Aug. 1	155.2	25	164.3
28	135.0	10	153.2	Apr. 4	165.9
Nov. 16	140.3	16	157.0	15	165.6
22	141.8	25	155.8	Aug. 7	170.25
29	138.9	Sept. 1	157.6	Sept. 3	162.05

Lowest water level for the day, from recorder graph, water year October 1968 to September 1969

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	...	...	169.18	166.80	172.85	173.98	169.85	...	170.05
10	...	...	...	...	...	...	169.46	172.45	172.80	167.40	175.66	172.60
15	...	...	...	...	...	...	167.03	173.35	174.04	173.00	176.57	173.85
20	...	...	...	...	...	...	168.25	172.70	172.10	172.93	174.93	186.40
25	...	...	...	...	...	...	170.25	172.60	173.08	...	174.11	176.80
Eom	...	...	...	...	...	...	173.90	174.56	174.56	...	176.28	176.35
Water year October 1969 to September 1970												
5	174.02	172.87	173.29	171.11	173.00	171.30	174.43	177.16	181.66	175.60	181.76	184.07
10	173.30	172.94	173.67	172.48	173.40	171.82	174.00	177.97	183.18	177.45	181.42	179.00
15	173.15	173.22	173.63	172.69	172.55	171.45	172.77	178.78	183.89	180.79	181.70	180.46
20	173.96	172.05	174.02	172.56	171.15	171.15	172.90	179.21	185.08	182.35	181.92	182.97
25	172.38	171.55	171.37	173.35	170.00	172.30	175.68	179.62	186.12	182.72	182.42	184.40
Eom	172.65	172.56	168.17	171.38	170.72	172.61	177.02	180.49	186.98	183.37	182.80	184.65
Water year October 1970 to September 1971												
5	...	182.56	182.60	172.50	179.39	181.97	180.97	178.63	179.13	...	179.70	176.66
10	185.81	181.80	182.70	175.84	179.92	182.66	180.00	179.06	179.57	176.12	178.58	173.94
15	186.34	181.84	182.80	177.41	180.45	182.98	178.24	178.66	178.30	178.01	177.97	175.81
20	185.62	182.33	182.65	177.80	180.62	182.27	175.23	178.65	179.17	177.22	177.07	...
25	184.60	182.67	171.85	179.15	181.95	181.98	175.62	179.05	179.35	178.77	177.77	177.14
Eom	184.34	182.75	163.40	179.52	179.31	181.53	178.10	179.28	...	178.47	177.40	178.03

365942N0763753.1. Local number 57D1. Gwaltney, Inc., Smithfield. Virginia Division of Water Resources well 5. Drilled unused artesian well in Lower Cretaceous sand, diam 6 in, depth 454 ft, cased to total depth. Lsd about 20 ft above msl. MP top of casing one ft above lsd. Highest water level, 70.95 February 25, 1968; lowest, 109.88 September 27, 1971. Records available: 1968-71. Records furnished by Virginia Division of Water Resources.

Lowest water level for the day, from recorder graph, water year October 1967 to September 1968

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	...	...	77.75	79.25	71.55	79.85	79.40	79.70	80.95
10	...	...	...	...	...	71.55	79.35	79.85	78.95	80.30	75.90	80.35
15	...	...	...	...	80.25	78.75	71.55	76.85	75.25	79.40	79.50	78.95
20	...	...	...	...	78.95	78.05	77.65	78.65	78.75	77.40	81.10	82.05
25	...	...	...	...	70.95	77.75	79.15	76.25	79.65	79.60	74.10	81.65
Eom	...	...	...	...	...	71.15	77.85	79.15	72.85	79.40	77.60	81.05
Water year October 1968 to September 1969												
5	77.85	82.05	85.05	78.35	84.80	85.35	84.95	85.95	87.80	81.00	87.75	85.90
10	82.35	77.45	85.05	84.75	83.60	83.95	86.55	83.20	88.00	88.40	81.00	85.46
15	82.15	83.05	78.55	84.85	81.70	82.55	87.05	87.67	78.00	88.40	89.65	85.10
20	76.25	83.45	85.75	82.55	85.00	86.05	79.65	87.12	84.70	80.90	89.05	85.15
25	83.25	82.35	78.05	...	85.20	85.85	87.25	79.87	87.80	88.45	88.10	89.19
Eom	82.65	80.55	85.25	...	...	84.95	86.95	83.32	86.45	88.55	82.50	88.55
Water year October 1969 to September 1970												
5	82.38	90.00	89.90	87.45	89.85	90.00	81.95	90.00	91.65	83.10	93.00	89.70
10	90.00	88.65	89.57	85.70	88.90	89.25	90.70	83.10	91.00	91.95	90.75	93.60
15	89.45	87.25	88.15	90.45	82.30	81.95	90.50	90.60	90.50	92.60	89.40	93.60
20	88.50	90.90	87.15	89.80	89.70	89.95	88.95	89.65	88.40	90.30	93.40	86.40
25	86.05	90.10	84.75	82.35	89.95	90.40	89.00	88.25	91.80	89.00	93.10	94.60
Eom	90.10	80.90	89.95	86.70	...	89.00	90.90	82.40	92.25	93.35	92.35	94.00

365942N0763753.1.--Continued

Lowest water level for the day, from recorder graph, water year October 1970 to September 1971

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	93.45	...	92.80	95.40	97.25	97.70	97.30	97.65	...	96.70	103.44	110.02
10	90.40	...	97.15	88.60	97.30	98.20	[illegible]	96.20	...	95.60	99.62	103.21
15	94.80	...	96.30	96.95	95.60	97.15	98.05	95.35	...	99.40	92.80	102.82
20	92.90	...	88.70	96.70	93.10	94.30	97.55	97.45	...	101.20	99.83	108.98
25	86.25	...	88.40	96.05	98.65	98.70	90.60	96.90	...	93.40	103.94	109.30
Eom	90.85	...	96.05	89.30	...	98.85	97.80	91.15	100.20	96.30	99.62	103.68

JAMES CITY COUNTY

371749N0764418.1. Local number 57G1. Eastern State Hospital, Williamsburg. Virginia Division of Water Resources well 1. Drilled unused artesian well in Lower Cretaceous sand, diam 8 in, depth 555 ft, cased to total depth. Lsd about 92 ft above msl. MP top of casing one ft above lsd. Highest water level, 127.42 July 2, 1968; lowest, 139.54 September 25, 1971. Records available: 1968-71. Records furnished by Virginia Division of Water Resources.

Lowest water level for the day, from recorder graph, water year October 1967 to September 1968

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	...	...	...	...	...	...	127.50	128.62	130.40
10	...	...	...	...	...	...	...	...	...	127.69	128.91	130.35
15	...	...	...	...	...	...	...	...	...	127.50	129.10	130.38
20	...	...	...	...	...	...	...	...	...	128.13	129.31	130.35
25	...	...	...	...	...	...	...	...	...	128.30	129.64	130.24
Eom	...	...	...	...	...	...	...	...	...	128.42	129.80	130.43

Water year October 1968 to September 1969

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	130.45	129.82	128.88	128.80	128.52	128.25	129.20	129.68	130.88	132.00	132.82	133.48
10	130.26	129.73	128.88	128.54	128.71	128.16	129.42	129.84	131.06	132.18	132.83	133.62
15	130.28	129.26	128.48	128.50	128.85	128.30	129.77	130.03	131.27	132.38	133.08	133.63
20	130.45	128.90	128.12	128.43	129.63	128.34	129.30	130.10	131.36	132.61	133.14	133.70
25	130.36	128.72	128.38	128.38	128.42	128.59	129.40	130.30	131.64	132.70	133.25	133.30
Eom	130.05	128.77	128.68	128.52	...	129.08	129.64	130.50	131.92	132.80	133.40	133.40

Water year October 1969 to September 1970

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	133.40	133.12	132.83	132.55	132.21	132.18	132.24	133.10	134.46	135.50	136.40	136.92
10	133.50	133.05	132.70	132.13	132.03	132.15	132.19	133.30	134.70	135.65	136.42	137.15
15	133.58	133.05	132.57	132.03	132.14	132.17	132.30	133.72	134.99	135.80	136.44	137.20
20	133.48	133.01	132.63	131.90	132.20	132.22	132.30	133.72	135.18	135.99	136.54	137.39
25	133.57	133.06	132.65	132.01	...	132.20	132.69	133.99	135.32	135.98	136.62	137.53
Eom	133.32	132.98	132.53	132.12	...	132.28	132.99	134.29	135.43	136.19	136.75	137.57

Water year October 1970 to September 1971

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	137.26	136.45	135.96	134.80	134.21	134.30	134.60	135.02	135.97	137.59	138.68	139.32
10	137.18	136.48	135.78	134.74	134.08	134.43	134.60	135.22	136.41	137.71	138.83	139.34
15	137.28	136.20	135.70	134.55	134.05	134.58	134.69	135.44	136.63	137.81	139.03	139.36
20	137.27	136.12	135.25	134.40	134.35	134.60	134.73	135.60	136.73	138.02	139.00	139.49
25	136.99	136.08	135.20	134.31	134.55	134.80	134.82	135.72	136.90	138.18	139.20	139.54
Eom	136.81	135.87	135.13	134.24	...	134.54	135.00	135.74	137.28	138.40	139.27	...

LANCASTER COUNTY

374249N0762301.1. Local number 59K1. County High School, Kilmarnock. Virginia Division of Water Resources well 15. Drilled unused artesian well in Lower Cretaceous sand, diam 4 in from 0 to 168 ft, 2 in from 168 to 716 ft, depth 716 ft, cased to total depth. Lsd about 85 ft above msl. MP top of casing at lsd. Highest water level, 95.81 February 11, 1968; lowest, 104.79 December 23, 1971. Records available: 1967-71. Records furnished by Virginia Division of Water Resources.

Lowest water level for the day, from recorder graph, water year October 1967 to September 1968

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	96.82	97.02	96.99	93.36	96.20	...	...	...	96.70	97.03	97.54	97.74
10	96.72	97.28	96.95	96.56	95.90	96.30	...	97.09	96.89	97.00	97.66	97.42
15	96.80	97.17	96.80	96.31	95.91	96.51	...	96.80	96.93	97.02	97.58	97.45
20	97.27	97.05	96.99	96.16	95.89	96.15	...	96.73	96.77	97.26	97.60	97.73
25	96.90	96.92	96.97	95.90	96.01	96.47	...	97.03	96.85	97.48	97.57	97.89
Eom	97.10	96.93	96.79	96.08	...	96.49	...	96.51	96.75	97.52	97.77	98.16

Water year October 1968 to September 1969

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	98.34	98.74	98.30	98.60	98.18	97.88	...	98.28	99.02	99.03	98.40	99.07
10	98.27	98.58	98.60	98.62	97.98	...	98.14	98.29	98.79	98.96	98.40	99.03
15	98.33	98.75	98.26	98.62	98.31	...	98.16	98.49	98.70	96.90	98.75	99.16
20	98.10	98.67	98.60	98.40	98.08	...	98.04	98.36	98.71	99.02	98.46	99.12
25	98.39	98.90	98.55	98.57	97.97	...	97.76	98.37	98.90	98.70	98.57	98.89
Eom	98.72	98.66	98.54	98.49	...	...	97.94	98.89	99.50	98.80	98.70	99.02

Water year October 1969 to September 1970

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	99.08	99.39	100.13	100.00	100.30	99.93	99.42	99.70	100.26	99.79	100.54	101.93
10	99.30	99.60	99.78	100.11	99.80	99.89	99.65	99.68	100.13	100.20	100.81	102.12
15	99.28	99.82	99.83	100.07	100.00	99.73	99.63	100.12	100.37	100.30	101.35	102.05
20	99.37	99.75	100.12	99.85	100.12	99.81	99.58	100.05	100.70	100.47	101.18	101.84
25	99.76	99.90	100.13	100.00	99.90	99.13	99.89	100.00	100.38	100.55	101.32	102.62
Eom	99.76	100.28	100.07	100.10	...	99.51	99.67	99.90	100.28	100.51	101.56	102.05

Water year October 1970 to September 1971

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	102.23	102.65	102.80	102.65	...	...	...	...	...	102.27	103.39	103.48
10	102.55	102.58	102.84	...	...	...	...	...	102.27	102.75	103.44	103.82
15	102.70	102.40	102.97	...	...	...	...	...	102.05	102.64	103.30	103.63
20	102.80	102.52	102.67	...	...	...	...	...	101.79	102.90	103.84	103.63
25	102.60	102.88	102.70	...	...	...	...	...	102.14	103.13	103.70	103.90
Eom	102.79	102.76	102.84	...	...	...	...	...	102.15	103.15	103.60	103.70

LOUDOUN COUNTY

391542N0774238.1. Local number 49Y1. American Telephone & Telegraph Co., Harpers Ferry. Virginia Division of Water Resources well 22. Drilled unused water-table well in bedrock, diam 8 in from 0 to 45 ft, 6 in from 45 to 516 ft, cased to 45 ft. Lsd about 940 ft above msl. MP top of casing one ft above lsd. Highest water level, 53.15 February 23, 1971; lowest, 60.12 October 25, 1970. Records available: 1969-71. Records furnished by Virginia Division of Water Resources.

Lowest water level for the day, from recorder graph, water year October 1968 to September 1969

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	...	...	...	...	...	...	...	...	58.60
10	...	...	...	...	...	...	...	...	...	...	...	58.56
15	...	...	...	...	...	...	...	...	...	...	...	58.60
20	...	...	...	...	...	...	...	...	...	...	...	58.77
25	...	...	...	...	...	...	...	...	...	...	...	58.88
Eom	...	...	...	...	...	...	...	...	...	...	59.91	59.00
				Water year October 1969 to September 1970								
5	58.92	59.30	58.47	57.45	54.62	57.11	54.57	56.96	...	...	57.79	59.20
10	58.99	59.22	58.49	57.43	55.37	57.22	55.85	57.52	...	57.00	58.30	59.77
15	59.04	59.17	57.17	57.95	55.29	57.49	52.51	57.30	...	57.55	58.58	59.30
20	59.09	58.76	57.29	57.88	56.17	57.79	54.77	57.33	...	58.28	58.70	59.35
25	59.14	58.27	57.80	57.69	56.20	56.38	55.45	57.80	...	58.60	58.90	59.38
Eom	59.20	58.37	58.08	56.07	...	55.34	55.92	58.26	...	56.64	59.13	59.40
				Water year October 1970 to September 1971								
5	59.45	59.55	58.91	57.89	58.28	55.55	58.03	58.40	55.48	58.60	59.26	58.46
10	60.04	59.59	59.19	56.67	58.24	55.25	57.26	58.46	55.58	58.71	59.18	58.90
15	60.08	57.43	59.30	57.27	55.46	56.50	57.31	57.40	56.80	58.86	59.28	57.32
20	60.11	58.13	57.94	57.47	56.20	57.28	57.60	55.49	57.74	59.04	59.32	57.13
25	60.12	58.30	56.29	57.81	53.74	57.57	57.78	55.86	58.15	59.15	59.38	58.05
Eom	60.09	58.70	57.50	57.89	...	57.77	58.21	55.55	58.42	59.25	59.42	58.50

LOUISA COUNTY

380217N0781337.1. Local number 45N1. (Formerly 1). Tyler well. Near Thelma, 3 mi southwest of Boswells Tavern on Tyler property near State Route 640. Drilled observation water-table well in Wissahickon Formation of late Precambrian (?) age, diam 6 in, depth 56 ft, cased with steel. Lsd about 500 ft above msl. MP top of casing 3.10 ft above lsd. Highest water level, 15.10 April 24, 1953; lowest, 32.24 October 15, 1966. Records available: 1952-71.

Water level at noon, from recorder graph, water year October 1967 to September 1968

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	30.7	28.70	27.66	26.66	26.32	26.62	27.40	28.90	30.22
10	...	...	...	30.4	28.36	27.55	26.62	26.35	26.58	27.56	29.07	30.40
15	...	...	...	30.0	28.17	27.61	26.39	26.40	26.74	27.85	29.12	30.68
20	...	...	...	29.5	27.95	27.18	26.40	26.48	26.76	28.04	29.54	30.93
25	...	...	...	29.2	27.88	27.13	26.32	26.72	26.90	28.31	29.72	31.10
Eom	...	...	...	28.9	27.73	26.85	26.22	26.60	27.16	28.68	29.99	31.37
				Water year October 1968 to September 1969								
5	31.63	32.95	33.63	33.97	33.41	32.28	30.51	29.49	29.42	29.12	28.51	26.75
10	31.86	33.19	33.73	34.00	33.26	31.98	30.30	29.38	29.40	29.06	28.27	26.58
15	32.10	33.29	33.78	34.03	33.06	31.74	30.12	29.37	29.34	29.07	...	26.37
20	32.28	33.39	33.84	34.03	32.84	31.47	29.96	29.29	29.26	28.99	e26.84	26.36
25	32.49	33.47	33.91	33.73	32.63	31.10	29.79	29.29	29.22	28.76	27.34	26.26
Eom	32.79	33.57	33.92	33.55	32.48	30.82	29.63	29.30	29.22	28.67	27.10	26.23
				Water year October 1969 to September 1970								
5	26.41	27.05	28.31	27.74	26.19	24.60	23.88	22.94	23.46	25.86	27.83	29.31
10	26.35	27.30	28.37	27.42	25.55	24.54	23.53	22.83	23.76	26.24	28.06	29.55
15	26.49	27.54	28.33	27.22	25.47	24.46	23.44	22.78	24.18	26.61	28.33	29.80
20	26.48	27.66	28.40	26.86	25.44	24.32	...	23.00	24.54	26.97	28.52	30.04
25	26.74	27.92	28.46	26.60	24.89	24.29	...	23.10	24.88	27.26	28.76	30.28
Eom	26.97	27.95	27.80	26.41	24.97	24.06	22.94	e23.30	25.36	27.54	29.00	30.46
				Water year October 1970 to September 1971								
5	30.78	32.06	32.70	32.75	31.43	29.13	27.27	25.96	24.43	23.62	25.26	26.97
10	30.99	32.23	32.79	e32.51	31.11	28.72	26.95	25.99	24.22	23.74	25.50	27.18
15	31.20	32.35	32.88	e32.31	e30.69	28.30	26.71	25.88	23.91	23.89	25.84	27.40
20	31.48	32.41	32.91	e32.10	e30.25	28.00	26.37	25.54	23.70	24.18	26.13	27.50
25	31.67	32.54	32.88	e31.89	e29.81	27.89	26.24	25.29	23.60	24.43	26.46	27.67
Eom	31.89	e32.60	32.85	e31.65	e29.55	27.50	26.11	24.57	23.58	24.92	26.75	27.73

e Estimated.

NANSEMOND COUNTY

364635N0763232.1. Local number 58C1. Nestle Co., Wilroy. Virginia Division of Water Resources well 4. Drilled unused artesian well in Lower Cretaceous sand, diam 20 in from 0 to 455 ft, 12 in from 455 to 884 ft, depth 884 ft, cased to 546 ft. Lsd about 20 ft above msl. MP top of casing 2 ft above lsd. Highest water level, 33.38 April 1, 1966; lowest, 65.45 February 21, 1971. Records available: 1966-71. Records furnished by Virginia Division of Water Resources.

Lowest water level for the day, from recorder graph, water year October 1965 to September 1966

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	...	...	...	33.40	34.30	36.19	...	...	...
10	...	...	...	...	...	...	33.50	34.76	35.90	...	...	...
15	...	...	...	...	...	...	...	35.25	35.76	...	...	...
20	...	...	...	...	...	33.40	...	35.78	...	...	...	...
25	...	...	...	...	...	33.47	...	36.15	...	...	...	35.40
Eom	...	...	...	...	...	33.38	33.92	36.26	...	...	...	35.31

364635N0763232.1.--Continued

Lowest water level for the day, from recorder graph, water year October 1966 to September 1967

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	35.39	35.60	35.83	35.80	...	...	...	...	37.66	38.76	39.92	...
10	35.42	35.53	35.77	35.72	...	...	...	37.10	37.72	38.82	40.04	...
15	35.38	35.59	35.80	35.69	36.12	36.14	...	...	37.91	38.78	39.87	40.00
20	35.41	35.62	35.72	35.89	...	...	...	37.48	38.06	39.03	39.87	40.03
25	35.35	35.64	35.80	35.89	...	...	...	37.44	38.32	39.42	...	40.03
Eom	35.46	35.64	35.84	...	...	...	...	37.58	38.51	39.66	...	40.04
Water year October 1967 to September 1968												
5	40.10	39.77	39.60	...	...	...	...	...	...	43.72	44.21	43.60
10	39.90	39.67	39.73	40.43	39.44	...	...	...	42.10	43.72	...	43.48
15	39.82	39.50	39.89	40.00	...	...	...	42.19	42.32	43.65	...	43.60
20	39.81	39.04	40.43	39.94	...	...	...	42.12	42.30	43.68	...	44.12
25	39.88	39.00	40.82	...	...	...	...	41.99	42.50	43.81	...	44.76
Eom	39.79	39.32	40.70	39.73	...	...	...	42.10	42.88	44.06	...	45.48
Water year October 1968 to September 1969												
5	47.37	47.90	46.98	...	49.19	48.53	48.03	48.21	48.23	48.37	48.70	49.26
10	46.96	48.10	46.58	...	49.03	48.20	48.08	48.14	48.28	48.53	48.72	49.25
15	46.38	47.62	46.82	...	49.07	48.26	48.13	48.26	48.19	48.60	48.73	49.40
20	46.63	47.44	47.22	...	48.89	48.10	48.04	48.20	48.10	48.70	48.80	49.43
25	47.08	47.22	47.49	49.49	48.70	47.96	48.03	48.14	48.22	48.70	48.97	49.40
Eom	47.66	46.84	48.10	49.52	...	48.13	48.08	48.20	48.38	48.73	49.18	49.53
Water year October 1969 to September 1970												
5	49.40	49.76	50.09	50.23	50.24	50.72	50.86	51.18	51.70	51.94	52.31	54.25
10	49.55	49.72	50.06	...	...	50.78	50.86	51.24	51.76	52.10	52.28	55.27
15	49.62	49.90	50.07	...	50.53	50.83	50.86	51.33	51.90	52.15	52.50	55.90
20	49.79	49.88	50.14	...	50.70	50.86	50.97	51.43	51.97	52.23	52.69	56.60
25	49.88	50.02	50.15	...	50.68	50.80	51.11	51.53	52.05	52.20	52.86	57.20
Eom	49.85	49.93	50.06	...	...	50.82	51.18	51.68	52.07	52.21	53.43	57.70
Water year October 1970 to September 1971												
5	58.34	61.10	62.89	63.10	64.77	64.68	62.17	61.07	60.51	60.87	60.91	60.87
10	58.80	61.46	63.24	63.20	64.97	64.29	61.83	60.86	60.60	60.89	60.97	60.80
15	59.28	61.61	63.50	63.46	65.16	63.75	61.60	60.81	60.57	60.82	60.99	60.74
20	59.90	61.92	63.50	64.00	65.39	63.22	61.44	60.60	60.65	60.88	60.94	60.78
25	60.20	62.30	63.30	64.37	65.34	63.00	61.32	60.65	60.62	60.93	60.96	60.78
Eom	60.80	62.52	63.25	64.73	...	62.37	61.23	60.47	60.75	60.99	60.79	60.63

PRINCE WILLIAM COUNTY

384930N0774208.1. Local number 49U1. Virginia Dept. of Highways. North of State Highway 55 near Thoroughfare Gap, 3.7 mi west of Haymarket. Drilled observation artesian well in shale and sandstone of Newark Group of Triassic age, diam 7 in, depth 345 ft, cased with steel to 20 ft. Lsd 383 ft above msl. MP top of casing 2.0 ft above lsd. Highest water level, 3.62 November 30, 1971; lowest, 9.65 October 28, 1970. Records available: 1970-71.

Lowest water level for the day, from recorder graph, water year October 1969 to September 1970

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	...	...	...	...	...	...	7.85	6.38	8.19
10	...	...	...	...	...	...	...	...	...	7.69	6.72	8.41
15	...	...	...	...	...	...	...	...	...	6.25	7.25	8.69
20	...	...	...	...	...	...	...	...	7.30	6.54	7.38	8.86
25	...	...	...	...	...	...	...	...	7.52	5.52	7.68	9.00
Eom	...	...	...	...	...	...	...	...	7.84	5.64	8.00	9.09
Water year October 1970 to September 1971												
5	9.32	9.16	7.28	5.75	5.75	4.36	5.80	6.19	4.37	6.89	7.79	7.81
10	9.45	9.04	7.47	5.41	4.98	4.62	4.38	6.31	4.94	7.26	7.27	7.92
15	9.49	7.02	7.70	5.49	4.47	4.95	4.64	5.51	5.18	7.52	7.52	7.99
20	9.64	6.80	6.72	5.63	4.76	5.00	4.98	4.52	5.12	7.90	7.67	7.99
25	9.54	6.98	5.50	5.48	4.39	5.49	5.56	4.62	5.85	8.02	8.06	8.07
Eom	9.62	7.02	6.03	5.57	4.61	5.62	6.02	4.41	6.48	8.35	7.90	8.07

385607N0773811.1. Local number 49V1. J. H. Hutchison. North of Haymarket at intersection of State Highways 600 and 615. Drilled observation artesian well in shale and sandstone of Newark Group of Triassic age, diam 7 in, depth 165 ft, cased with steel to 10 ft. Lsd 420 ft above lsd. MP top of casing one ft above lsd. Highest water level, 7.97 February 23, 1971; lowest, 12.28 July 12, 1970. Records available: 1970-71.

Lowest water level for the day, from recorder graph, water year October 1969 to September 1970

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	...	...	...	...	9.15	10.05	11.22	12.13	11.28
10	...	...	...	...	...	...	...	9.55	10.08	11.77	11.89	11.42
15	...	...	...	...	...	...	...	9.48	10.42	12.25	11.55	11.54
20	...	...	...	...	...	...	...	9.43	...	11.81	11.40	11.60
25	...	...	...	...	...	...	...	9.76	...	12.27	11.24	11.68
Eom	...	...	...	...	...	...	...	10.08	...	12.19	11.14	11.59
Water year October 1970 to September 1971												
5	11.74	10.44	...	8.98	9.36	8.26	9.44	9.93	8.51	10.42	10.44	10.79
10	11.81	10.21	9.92	8.69	9.01	8.50	...	10.20	8.42	10.63	10.50	10.88
15	11.84	8.66	9.82	8.78	...	8.64	8.84	9.64	8.92	10.77	10.56	9.46
20	11.60	8.53	8.85	...	...	8.99	9.25	9.07	9.22	10.95	10.78	9.16
25	11.20	...	8.28	9.18	8.14	9.20	9.73	9.01	9.75	11.01	11.01	9.56
Eom	11.18	...	8.94	8.74	8.24	9.43	10.07	8.73	10.10	10.91	10.76	9.70

383634N0771513.1. Local number 52S4. District of Columbia Dept. of Sanitary Engineering. Featherstone test well 1. Woodbridge. Drilled observation artesian well in sand and gravel of Potomac Group of Early and Late Cretaceous age, diam 10 in, depth 186 ft, cased with steel to 156 ft. Lsd 28 ft above msl. MP top edge of recorder shelf 3.3 ft above lsd (top of casing 1.9 ft above lsd before Aug. 26, 1971.) Highest water level, 18.45 September 13, 1971; lowest, 20.05 June 30, 1969. Records available: 1969-71.

Date	Water level	Date	Water level	Date	Water level
June 25, 1969	19.52	Apr. 30, 1971	18.96	Sept. 5, 1971	*18.87
30	20.05	June 3	18.66	10	*18.82
Jan. 26, 1970	19.51	July 2	18.92	15	*18.75
Oct. 28	19.00	9	18.95	20	*18.73
Jan. 11, 1971	19.33	Aug. 2	19.03	25	*18.92
Feb. 17	19.41	24	19.05	28	18.86
Mar. 8	19.30	26	19.18	30	*18.80
Apr. 1	19.07	31	*19.06		

* Lowest water level for the day, from recorder graph.

383634N0771513.2 Local number 52S5. District of Columbia Dept. of Sanitary Engineering. Featherstone test well 2. Woodbridge. Drilled observation artesian well in sand and gravel of Potomac Group of Early and Late Cretaceous age, diam 6 in, depth 114 ft, cased with steel to 95 ft. Lsd 28 ft above msl. MP top of casing 2.2 ft above lsd. Highest water level, 17.95 July 2, 1971; lowest, 18.96 July 1, 1969. Records available: 1969-71.

Date	Water level	Date	Water level	Date	Water level
July 1, 1969	18.96	Mar. 8, 1971	18.28	July 9, 1971	18.01
Jan. 26, 1970	18.76	Apr. 1	18.30	Aug. 2	18.18
Oct. 28	18.69	30	18.21	24	18.24
Jan. 11, 1971	18.61	June 3	17.96	Sept. 28	18.15
Feb. 17	18.71	July 2	17.95		

ROANOKE COUNTY

371653N0795521.1. Local number 31G1. Nelson-Roanoke Corp., Roanoke. Virginia Division of Water Resources well 8. Drilled unused water-table well in Elbrook Formation, diam 6 in, depth 48 ft. Lsd about 917 ft above msl. MP top of casing 11 in above lsd. Highest water level, 16.74 May 31, 1971; lowest, 19.26 July 20, 1968. Records available: 1967-71. Records furnished by Virginia Division of Water Resources.

Lowest water level for the day, from recorder graph, water year October 1965 to September 1966

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	...	...	...	...	...	...	...	...	18.82
10	...	...	...	...	...	...	...	...	...	...	...	18.87
15	...	...	...	...	...	...	...	...	...	...	...	17.89
20	...	...	...	...	...	...	...	...	...	...	18.58	17.75
25	...	...	...	...	...	...	...	...	...	...	18.61	18.08
Eom	...	...	...	...	...	...	...	...	...	...	18.74	18.11
Water year October 1966 to September 1967												
5	18.17	18.35	18.27	17.81	18.01	18.03	18.15	18.48	18.46	...	...	...
10	18.38	18.48	18.31	17.81	18.01	17.21	18.33	18.31	18.60	...	...	...
15	18.52	18.55	18.13	17.89	18.03	17.37	18.42	18.47	18.67	...	...	...
20	17.22	18.48	18.11	18.01	17.88	17.51	18.48	18.58	18.61	...	...	...
25	18.01	...	18.13	18.08	17.81	17.56	18.55	18.58	...	...	...	...
Eom	18.31	...	18.01	17.92	...	17.81	18.52	18.61	...	...	...	...
Water year October 1967 to September 1968												
5	18.79	18.89	18.45	18.07	17.88	18.39	18.53	18.64	18.56	18.59	...	...
10	18.77	18.95	18.53	18.26	18.06	18.38	18.65	18.73	18.46	18.56	...	...
15	18.87	18.95	18.16	17.72	18.17	18.05	18.72	18.65	18.59	18.74	18.97	...
20	18.67	18.97	18.26	17.82	18.26	17.90	18.78	18.76	18.59	18.71	19.26	...
25	18.79	18.96	18.33	17.45	18.35	18.09	18.72	18.81	18.66	18.56	18.94	...
Eom	18.86	18.79	18.14	17.73	...	18.40	18.44	18.64	18.65	18.65	18.77	...
Water year October 1968 to September 1969												
5	...	18.55	18.56	18.55	17.86	17.92	18.02	18.61	18.78	18.52	18.26	18.39
10	...	18.54	18.57	18.47	17.72	17.59	18.20	18.66	18.69	18.52	18.40	18.49
15	...	18.28	18.60	18.50	17.96	17.89	18.35	18.70	18.72	18.55	18.55	18.57
20	16.46	18.38	18.60	18.40	18.09	18.00	18.39	18.70	18.67	18.60	17.44	18.42
25	17.86	18.52	18.52	17.96	18.10	17.40	18.50	18.80	18.43	18.41	18.02	18.40
Eom	18.36	18.56	18.48	18.14	...	17.81	18.60	18.90	18.50	18.60	18.30	18.52
Water year October 1969 to September 1970												
5	18.28	...	18.28	17.52	17.77	17.82	17.91	...	18.53	18.65	...	18.53
10	18.20	...	18.17	17.73	17.70	17.90	18.16	...	18.50	18.65	...	18.17
15	18.32	...	17.98	17.90	17.80	17.97	...	...	18.56	18.67	...	18.40
20	18.40	18.53	18.10	17.90	17.62	17.97	...	...	18.61	18.70	...	18.52
25	...	18.28	18.13	17.97	17.73	17.96	...	...	18.62	18.39	...	18.60
Eom	...	18.23	17.10	18.03	...	18.10	...	...	18.60	18.20	18.51	18.61
Water year October 1970 to September 1971												
5	18.65	17.20	17.73	17.58	17.84	17.10	17.80	18.29	17.39	18.08	17.69	18.20
10	18.61	17.70	17.80	17.61	17.29	17.34	17.37	18.10	17.60	17.99	17.85	18.25
15	18.62	17.30	17.85	17.70	16.78	17.52	17.73	17.90	17.80	18.06	17.97	18.00
20	18.63	17.67	17.78	17.79	17.25	17.67	17.87	17.90	17.60	18.10	18.00	18.05
25	18.48	...	17.58	17.77	17.29	17.80	17.98	17.68	17.82	18.08	18.10	18.00
Eom	16.94	17.67	17.71	17.80	...	17.76	18.08	16.74	18.00	17.95	18.14	18.12

ROCKINGHAM COUNTY

382150N0784240.1. Local number 41Q1. Virginia Dept. of Highways, McGaheysville. Drilled observation artesian well in Conococheague Limestone of Upper Cambrian age, diam 6 1/4 in, depth 310 ft, cased with steel to 131 ft. Lsd 1105 ft above msl. MP top edge of recorder shelf 3.5 ft above lsd. Highest water level, 64.43 June 2, 1971; lowest, 81.70 October 31, 1970. Records available: 1970-71.

Lowest water level for the day, from recorder graph, water year October 1969 to September 1970

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	...	...	...	...	...	...	...	...	74.22
10	...	...	...	...	...	...	...	...	...	...	...	74.88
15	...	...	...	...	...	...	...	...	...	...	...	75.54
20	...	...	...	...	...	...	...	...	...	...	72.41	76.20
25	...	...	...	...	...	...	...	...	...	...	72.90	76.88
Eom	...	...	...	...	...	...	...	...	...	...	73.58	77.58
Water year October 1970 to September 1971												
5	78.29	81.46	75.16	71.76	69.15	66.85	67.37	67.82	64.67	65.99	67.53	68.32
10	79.05	81.10	74.88	70.75	68.97	66.72	67.40	68.04	65.25	66.25	67.00	68.69
15	79.78	80.05	74.91	70.07	68.14	66.78	67.38	68.14	65.42	66.45	67.15	69.10
20	80.50	78.94	74.83	69.51	67.73	66.90	67.40	67.94	65.09	66.76	67.37	69.44
25	81.12	77.44	74.16	69.32	67.21	67.11	67.51	67.06	65.40	67.06	67.71	69.64
Eom	81.70	75.88	72.66	69.14	67.09	67.23	67.68	65.50	65.73	67.48	68.00	69.96

SMYTH COUNTY

364722N0814046.1. Local number 17C1. Bonham Bros. Orchards, Chilhowie. Virginia Division of Water Resources well 25. Drilled unused water-table well in Athens Shale, diam 6 in, depth 2 0 ft, cased to 50 ft. Lsd about 2000 ft above msl. MP top of casing 1.7 ft above lsd. Highest water level, 1.30 May 8, 1971; lowest, 5.70 December 25, 1969. Records available: 1969-71. Records furnished by Virginia Division of Water Resources.

Lowest water level for the day, from recorder graph, water year October 1968 to September 1969

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	...	...	...	...	...	...	...	...	4.36
10	...	...	...	...	...	...	...	...	4.78	...	...	4.37
15	...	...	...	...	...	...	...	...	4.81	...	...	4.28
20	...	...	...	...	...	...	...	...	4.90	...	...	4.37
25	...	...	...	...	...	...	...	...	4.81	4.98	...	4.40
Eom	...	...	...	...	...	...	...	...	5.09	4.78	...	4.31
Water year October 1969 to September 1970												
5	...	5.58	5.69	4.89	4.38	3.98	3.64	2.76	4.14	4.95	4.90	4.77
10	...	5.64	5.65	5.11	3.96	4.14	3.76	3.15	4.09	5.01	4.09	4.99
15	...	5.30	5.57	5.10	3.82	4.02	3.70	3.28	4.41	5.13	4.66	5.10
20	...	5.32	5.63	4.85	3.50	4.10	3.72	3.53	4.45	5.27	5.01	5.13
25	...	5.58	5.70	4.95	3.72	4.00	3.68	3.75	4.66	5.12	4.95	5.20
Eom	...	5.62	3.57	...	...	4.12	1.81	3.99	4.86	4.92	5.13	5.01
Water year October 1970 to September 1971												
5	5.18	4.72	5.13	4.60	3.09	2.59	3.22	2.33	2.95	3.11	2.89	3.31
10	5.25	5.08	5.22	5.01	3.30	2.73	2.88	1.74	2.66	3.19	2.61	3.44
15	5.24	5.00	5.08	4.70	2.90	2.82	3.06	1.72	2.61	3.02	2.69	3.43
20	5.25	5.10	5.20	4.98	3.01	2.93	3.17	2.23	2.80	3.15	2.90	3.54
25	5.26	5.10	4.50	3.64	2.99	3.06	2.50	2.57	2.70	3.33	3.00	3.69
Eom	4.60	5.12	5.01	4.13	...	3.09	2.33	2.50	2.94	2.54	3.28	3.79

SOUTHAMPTON COUNTY

363457N0771149.1. Local number 53A2. Town of Boykins. Near elementary school at Bryant Ave. and Elizabeth St. Drilled unused artesian well in sand of Potomac Group of Early and Late Cretaceous age, diam 8 in, depth 270 ft, cased with steel. Lsd 38 ft above msl. MP top of casing 1.5 ft above lsd. Highest water level, 46.88 March 10, 1969; lowest, 57.47 September 9, 1971. Records available: 1968-71. Water level affected by local pumpage.

Lowest water level for the day, from recorder graph, water year October 1967 to September 1968

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	...	...	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...	...	...	...	...	...
15	...	...	...	...	...	...	...	...	...	...	...	...
20	...	...	...	...	...	...	...	...	...	...	...	...
25	...	...	...	...	...	...	...	...	...	...	...	...
Eom	...	...	...	...	...	...	...	...	...	a48.62	...	...
Water year October 1968 to September 1969												
5	...	48.73	48.81	49.91	49.57	47.98	49.54	50.94	51.86	50.38	...	51.44
10	...	48.47	...	50.10	49.51	48.59	49.70	51.70	51.97	51.18	49.95	51.45
15	...	48.77	...	50.17	...	49.83	50.27	...	52.08	51.00	51.25	51.43
20	49.45	48.90	...	49.24	...	49.67	50.80	51.15	...	51.08	51.20	52.09
25	48.87	48.76	...	50.07	...	49.18	50.39	51.75	51.50	50.80	51.00	51.89
Eom	48.83	48.83	...	49.99	49.84	49.30	50.55	51.20	50.80	50.71	50.95	51.54
Water year October 1969 to September 1970												
5	51.50	51.20	52.24	51.69	...	51.37	51.30	51.50	53.05	...	53.18	...
10	51.75	50.96	51.67	52.37	...	51.22	51.51	51.53	52.75	52.78	52.50	...
15	51.66	51.22	51.49	52.12	...	51.35	51.22	51.93	53.37	52.83	53.09	...
20	51.35	51.60	51.85	...	...	51.42	51.28	52.01	54.10	52.82	...	...
25	51.66	51.62	51.78	...	...	51.34	51.67	52.08	...	52.56	...	b53.80
Eom	51.43	51.82	51.66	...	...	51.18	52.05	51.85	...	53.01	...	...

363457N0771149.1.--Continued

Lowest water level for the day, from recorder graph, water year October 1970 to September 1971

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	c53.82	...	...	...	...	55.10	...	g56.29	55.44	57.12	57.13
10	...	...	...	...	...	54.90	55.38	...	...	55.80	57.00	57.47
15	...	...	55.23	...	...	54.67	55.30	...	...	56.30	57.20	57.16
20	...	...	d54.60	...	...	54.99	55.30	...	...	56.31	57.16	57.14
25	...	...	...	...	...	55.24	55.30	...	...	56.59	56.79	57.27
Eom	...	...	...	f54.55	...	55.15	...	...	55.39	57.24	56.68	57.17

a Taped measurement July 28.
b Taped measurement Sept. 23.
c Taped measurement Nov. 5.
d Taped measurement Dec. 20.
f Taped measurement Jan. 26.
g Taped measurement June 3.

364706N0770723.1. Local number 54C1. (Formerly 29). Norfolk and Western Railway. Sebrell. Drilled unused artesian well in sand and gravel of pre-Miocene age, diam 10 in, depth 344 ft, cased with steel. Lsd 58.4 ft above msl. MP top of casing at lsd. Highest water level, 15, 1907; lowest, 84.49 August 26, 1971. Records available: 1907, 1940-46, 1948-71.

Date	Water level	Date	Water level	Date	Water level
Jan. 2, 1969	76.86	Sept. 10, 1969	78.34	Sept. 22, 1970	82.14
Feb. 17	76.84	25	78.32	Nov. 4	82.82
Mar. 31	77.05	Oct. 20	78.70	Dec. 14	83.44
Apr. 1	77.05	Dec. 4	79.62	30	81.44
30	77.19	Jan. 22, 1970	79.59	Jan. 25, 1971	83.34
May 7	77.32	Mar. 3	79.61	Mar. 8	83.05
27	77.32	Apr. 9	79.27	Apr. 19	83.49
June 16	77.58	May 18	79.72	June 2	83.69
July 28	77.92	July 8	80.39	July 12	84.14
Aug. 27	78.14	Aug. 11	80.96	Aug. 26	84.49

SURRY COUNTY

370408N0764601.1. Local number 56E1. Buster Cox. On State Highway 617, 3.2 mi southwest of Bacons Castle. Drilled unused artesian well in sand of Potomac Group of Early and Late Cretaceous age, diam 18 in, depth 705 ft, cased with steel to 401 ft. Lsd 93 ft above msl. MP top of edge of recorder shelf 3.6 ft above lsd. Highest water level, 73.52 March 10, 1942; lowest, 125.59 September 29, 1971. Records available: 1942, 1969-71.

Water level (from taped measurement) Mar. 10, 1942 73.52

Lowest water level for the day, from recorder graph, water year October 1968 to September 1969

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	...	...	...	...	...	...	...	...	117.41
10	...	...	...	...	...	...	...	...	...	...	116.76	117.50
15	...	...	...	...	...	...	a115.30	...	...	...	116.86	117.62
20	...	...	...	...	...	...	...	...	...	...	116.86	117.68
25	...	...	...	...	...	...	...	...	...	...	117.04	117.53
Eom	...	...	...	...	...	...	...	...	...	b116.56	117.30	117.65
	Water year October 1969 to September 1970											
5	117.71	117.72	118.11	118.15	118.27	118.25	118.40	118.55	119.05	119.45	120.25	120.86
10	117.74	117.75	118.10	118.09	118.13	118.27	118.38	118.65	119.16	119.63	120.35	121.05
15	117.77	117.80	117.99	118.16	118.25	118.31	118.45	118.80	119.35	119.75	120.48	121.17
20	117.83	117.87	118.10	118.16	118.27	118.39	118.44	118.81	119.43	119.91	120.57	121.28
25	117.91	117.96	118.14	118.18	118.25	118.36	118.50	118.88	119.46	119.90	120.64	121.40
Eom	117.91	e117.90	118.04	118.21	118.40	118.39	118.56	119.03	119.51	120.06	120.80	121.34
	Water year October 1970 to September 1971											
5	121.45	121.58	121.98	122.11	122.36	122.48	122.88	123.15	123.32	124.03	124.63	125.18
10	121.51	121.77	122.08	122.13	122.40	122.65	122.90	123.23	123.45	124.15	124.75	125.24
15	121.55	121.65	122.15	122.15	122.38	122.70	122.95	123.25	123.50	124.11	124.90	125.23
20	121.65	121.74	122.06	122.25	122.45	122.69	122.97	123.22	123.59	124.26	124.89	125.41
25	121.59	121.89	122.01	122.25	122.50	122.90	122.99	123.28	123.66	124.40	125.03	125.52
Eom	121.65	121.94	122.11	122.32	22.49	122.80	123.10	123.20	123.85	124.55	125.03	125.56

a Taped measurement Apr. 14.
b Taped measurement July 29.
e Estimated.

WESTMORELAND COUNTY

380534N0764908.1. Local number 56N1. Washington and Lee School Board, Montross. Virginia Division of Water Resources well 16. Drilled unused artesian well in Lower Cretaceous sand, diam 4 in from 0 to 189 ft, 2 in from 189 to 646 ft, cased to 608 ft. Lsd about 149 ft above msl. MP top of casing one ft above lsd. Highest water level, 133.47 August 28, 1967; lowest, 146.27 October 14, 1970. Records available: 1967-71. Records furnished by Virginia Division of Water Resources.

Lowest water level for the day, from recorder graph, water year October 1966 to September 1967

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
5	...	...	...	...	...	...	...	...	...	...	...	133.70
10	...	...	...	...	...	...	...	...	...	...	...	133.77
15	...	...	...	...	...	...	...	...	...	...	...	133.86
20	...	...	...	...	...	...	...	...	...	...	...	133.83
25	...	...	...	...	...	...	...	...	...	...	133.54	133.77
Eom	...	...	...	...	...	...	...	...	...	...	133.73	133.83
Water year October 1967 to September 1968												
5	133.89	134.45	134.33	134.31	134.60	135.79	136.22	136.92	...	...	...	...
10	133.83	134.47	134.55	134.43	134.81	136.00	136.25	...	...	...	...	...
15	134.07	134.21	134.43	134.39	134.96	136.04	136.50	...	...	...	...	...
20	134.14	134.43	134.47	134.51	134.91	135.81	136.49	...	...	...	...	...
25	134.02	134.33	134.43	134.61	135.33	135.84	136.86	...	...	...	...	...
Eom	134.11	134.40	134.39	134.73	...	136.22	136.90	...	...	...	...	...
Water year October 1968 to September 1969												
5	...	...	141.28	141.00	140.88	140.72	140.77	140.95	141.59	141.70	141.45	141.60
10	...	141.84	141.40	141.00	140.87	140.64	140.76	141.05	141.41	...	141.62	141.48
15	...	141.83	141.36	...	140.80	140.59	140.82	141.40	141.58	...	141.79	141.68
20	...	141.90	141.72	...	140.90	140.59	140.81	141.43	141.60	...	141.53	141.85
25	...	141.50	141.30	...	140.70	140.51	140.82	141.31	141.58	...	141.31	141.61
Eom	...	141.57	140.74	...	...	140.47	141.09	141.37	141.78	...	141.60	141.58
Water year October 1969 to September 1970												
5	141.82	141.30	141.24	140.62	141.10	141.56	141.85	141.47	142.38	142.50	143.12	144.76
10	141.39	141.24	141.12	141.26	140.88	141.55	141.40	141.64	142.50	142.56	143.23	144.80
15	141.47	141.29	140.82	141.04	141.32	141.54	141.50	142.09	142.62	142.50	143.56	145.08
20	141.40	141.47	141.01	140.82	141.77	141.52	141.50	142.05	142.79	142.61	143.79	145.34
25	141.59	141.28	140.93	141.01	141.44	141.23	141.50	142.07	142.88	142.71	143.67	145.63
Eom	141.52	141.18	140.56	141.15	...	141.38	141.57	142.34	142.62	142.70	144.19	145.60
Water year October 1970 to September 1971												
5	145.80	145.50	144.30	141.43	143.52	143.56	143.77	144.11	144.21	144.50	...	145.25
10	146.23	145.17	144.23	143.60	143.62	143.60	144.40	144.15	144.33	144.24	...	145.10
15	146.27	144.74	144.11	143.49	143.40	143.59	144.22	144.37	144.26	144.40	...	145.00
20	146.12	144.55	144.08	143.49	143.51	143.75	143.95	144.27	144.57	144.75	145.38	145.02
25	146.26	144.58	143.99	143.40	143.43	143.96	144.10	144.11	144.41	145.27	145.20	145.07
Eom	145.88	144.00	143.89	143.56	...	143.72	144.40	143.97	144.57	144.74	145.07	145.08

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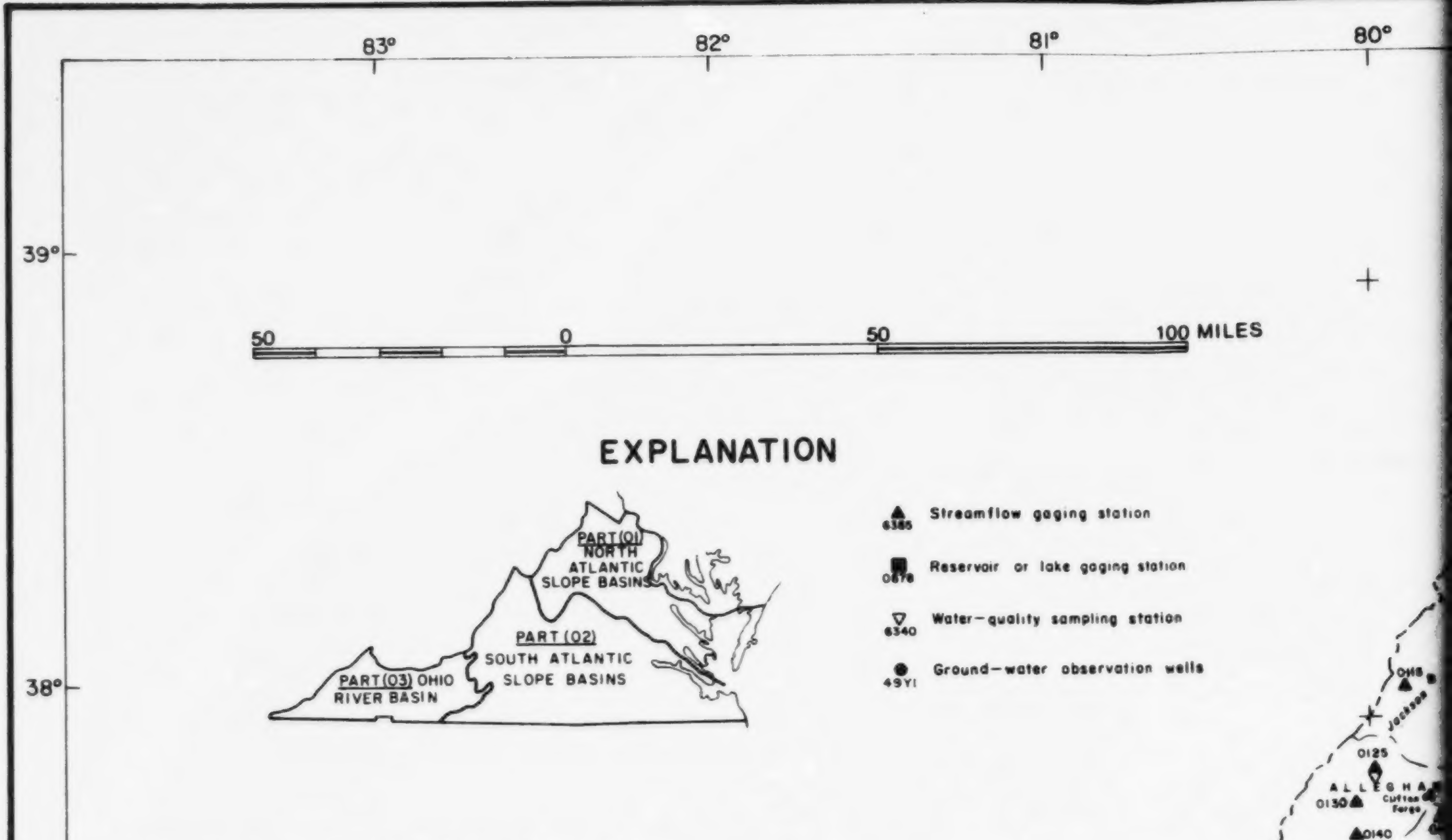
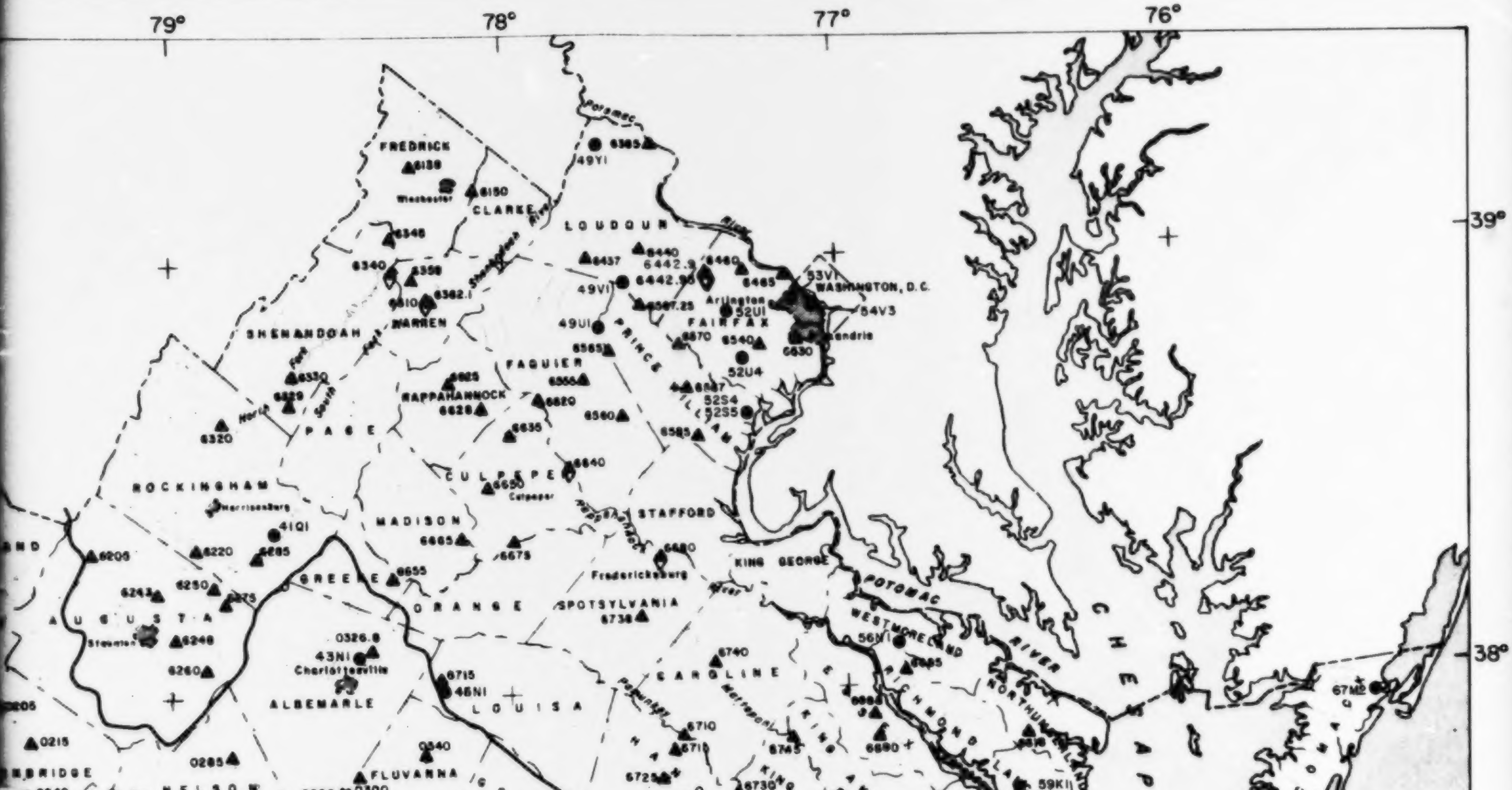

83°
82°
81°
80°
39°
38°
37°
50
0
50
100 MILES
EXPLANATION
PART (01) NORTH ATLANTIC SLOPE BASINS
PART (02) SOUTH ATLANTIC SLOPE BASINS
PART (03) OHIO RIVER BASIN
6385 Streamflow gaging station
0678 Reservoir or lake gaging station
6340 Water-quality sampling station
49Y1 Ground-water observation wells
NOTE. Station numbers abbreviated; first two digits (part number) and last two digits (if zeros) are omitted. Example; Station number 02026000 shown as 0260. Observation wells identified by local well number.
BUCHANAN
DICKENSON
TAZEWELL
BLAND
GILES
MONTGOMERY
ROANOKE
PULASKI
WYTHE
FLOYD
CARROLL
GRAYSON
PATRICK
WISE
RUSSELL
SCOTT
LEE
WASHINGTON
SMYTH
ALLEGHANY
CRAIG
J.W. Flanagan Reservoir
N.F. Pound Reservoir
Claytor Lake
Powell River
Clinch
Holston
North Fork
Middle Fork
South Fork
Bristol
Roanoke
Smith
Jackson
Clifton Forge
0125
0130
0140
0160
0175
0185
0551
31H1
0548
0550
0538
1765
1755
1730
1715
1777
1710
1690
1700
1680
1670
1675
1655
1640
1650
2801
0678
0678.2
0719
0720
0730
0700
0697
2076
2075
2090
2089.9
2082
2085
2088.5
2087
2086.6
2088
2089.5
6218
5240
4880
4740
4718
4750
4784
5318
5270
5260
5200

FIGURE 2. Map of Virginia showing location of surface-water

X

306


79°
78°
77°
76°
39°
38°
37°
FREDRICK
Winchester
CLARKE
LOUDOUN
WARREN
SHENANDOAH
PAGE
ROCKINGHAM
Harrisonburg
RAPPAHANNOCK
FAUQUIER
PRINCE WILLIAM
FAIRFAX
Arlington
WASHINGTON, D.C.
Alexandria
CULPEPER
Culpeper
MADISON
STAFFORD
Fredericksburg
KING GEORGE
GREENE
AUGUSTA
Staunton
ORANGE
SPOTSYLVANIA
ALBEMARLE
Charlottesville
LOUISA
CAROLINE
WESTMORELAND
RICHMOND
NORTHUMBERLAND
LANCASTER
ESSEX
KING AND QUEEN
KING WILLIAM
HANOVER
MIDDLESEX
GLOUCESTER
MATHEWS
NELSON
FLUVANNA
GOOCHLAND
HENRICO
AMHERST
BUCKINGHAM
CUMBERLAND
POWHATAN
Richmond
NEW KENT
CHARLES CITY
JAMES CITY
CHESTERFIELD
Lynchburg
APPOMATTOX
AMELIA
Hopewell
PRINCE GEORGE
Petersburg
PRINCE EDWARD
Farmville
CAMPBELL
NOTTOWAY
DINWIDDIE
SURRY
CHARLOTTE
LUNENBURG
SUSSEX
ISLE OF WIGHT
HALIFAX
BRUNSWICK
GREENSVILLE
SOUTHAMPTON
NANSEMOND
MECKLENBURG
Portsmouth
Virginia Beach
Chesapeake
Lake Drummond
John H. Kerr Reservoir
Lake Gaston
Leesville Lake
ACCOMACK
NORTHAMPTON
ATLANTIC OCEAN
CHESAPEAKE BAY
POTOMAC RIVER
Potomac
Shenandoah River
Rappahannock River
James River
Appomattox River
Chickahominy River
Pamunkey River
Mattaponi River
York River
Blackwater River
Nottoway River
Meherrin River
Roanoke River
6385
49Y1
6139
6150
6345
6340
6355
6310
6362.1
6437
6440
6442.9
6442.95
6460
6465
49V1
53V1
52U1
54V3
6670
6540
52U4
6630
49U1
6565
6555
6625
6628
6620
6560
6635
6585
6587
52S4
52S5
6330
6329
6320
6640
6650
41Q1
6665
6675
6680
6205
6220
6285
6273
6655
6243
6250
6248
6260
0326.8
43N1
6715
46N1
6738
6740
56N1
6685
0205
0215
0285
0340
6710
6745
6690
6725
0240
0290
0300
0305
6730
6735
6695
59K1
67M2
0270
0275
0276
0345
0350
0365
0370
0375
0255
0280
0380
0400
6700
0425
4061
0388.5
0395
0390
51G1
52G1
57G1
0410
0416.5
0615
0605
0640
0440
0460
56E1
0475
57D1
0655
0652
0665
0510
0445
0485
0480
0660
0516
54C1
0470
0495
58C1
0770
39C1
0515
0525
0625
55B16
55B22
0435
0430
0786.4
0784.9
53A2
0755
0760
0775
0765

er-quality stations and ground-water observation wells.

B